Revision

# Science Exercises for November Syllabus

## Concept 2: Energy Flow in Ecosystems
## Concept 3: Changes in Food Webs

### 1 Choose the correct answer:

1. ............ are both primary and secondary consumers.
   a. Plants  b. Fungi
   c. Humans  d. Predators

2. In any food chain, the primary consumers may be ............ .
   a. predators only  b. prey only
   c. predators or prey  d. green plants

3. Decomposers can get their energy from ............ .
   a. living things  b. soil and water
   c. dead organisms  d. the sun

4. The relationship between ............ is "predator and prey" relationship.
   a. algae and corals  b. frogs and locusts
   c. rabbits and carrots  d. eagles and fungi

5. The tertiary consumer does not exist in food chain (............)
   a. Algae → coral → parrotfish → shark
   b. Grass → mouse → snake → eagle
   c. Grass → locust → frog → snake
   d. Carrot → rabbit → fox → bacteria

6. In this food chain (Grass → rabbit → hawk), if the rabbits disappear, ............ will increase.
   a. grass  b. hawks
   c. a and b  d. no correct answer

7. In this food chain (Acacia tree → giraffe → lion), the symbol (→) represents the flow of ........ .

a. pollution
b. force
c. energy
d. motion

8. Primary consumers are the ........ link in their food chain.

a. first
b. second
c. third
d. final

9. Healthy desert ecosystems always require ........ from time to time.

a. strong winds
b. heavy rain
c. gentle rain
d. floods

10. Which of the following examples causes the greatest damage to an ecosystem?

a. Grass removal
b. Predators extinction
c. Predators increase
d. Prey increase

11. Heavy rain may ........ the desert ecosystem.

a. improve
b. benefit
c. harm
d. restore

12. If the grass is removed from an ecosystem, ........ will die first.

a. primary producers
b. primary consumers
c. secondary consumers
d. decomposers

13. When a predator feeds on prey, ........ is transferred between them.

a. water
b. blood
c. motion
d. energy

14. When the number of predators increases, the number of ........ decreases.

a. producers
b. other predators
c. prey
d. decomposers

15. Human activities and pollution in ............ impact the marine ecosystem quickly.
 a. cities  b. forests
 c. deserts  d. islands

16. All the following examples represent bad human activities, except ............ .
 a. overfishing  b. air pollution
 c. floods  d. plastic pollution

17. Nutrients are recycled back into the ecosystem by the ............ .
 a. predators  b. prey
 c. consumers  d. decomposers

18. In most marine food webs, ............ are considered producers.
 a. grass  b. algae
 c. bacteria  d. small fish

19. All the following have bad impact on the marine ecosystem, except ............ .
 a. island pollution  b. heavy rain
 c. plastic pollution  d. overfishing

20. If the number of primary consumers increases so much, ............ will disappear.
 a. producers  b. decomposers
 c. secondary consumers  d. tertiary consumers

21. All the following organisms can make their own food, except ............ .
 a. grass  b. worms
 c. algae  d. microorganisms

22. If the climate change was suitable, the living organisms will ............ .
 a. die  b. migrate
 c. survive  d. extinct

23. ............ live on the tops of mountain cliffs and depend on fish as their main source of food.
 a. Eagles  b. Hawks
 c. Owls  d. Seabirds

24 ........ are/is considered the producers in the marine food web.

a. Small fish
b. Coral reefs
c. Marine microorganisms
d. Grass

25 The migration of microorganisms to a new habitat is due to the increase of ........ .

a. the air temperature
b. the water temperature
c. the number of seabirds
c. the number of fish

26 Increasing water temperature may cause all the following, except ........ .

a. increasing microorganisms
b. coral bleaching
c. migration of fish
d. death of some seabirds

27 If the turtle sees a plastic piece, the turtle will ........ .

a. avoid it
b. escape quickly
c. begin to eat it
d. digest it

28 ........ is one of the best ways to protect the marine ecosystem.

a. Throwing sewages in seas
b. Using plastics for single use
c. Breaking plastics
d. Recycling plastics

29 Micro-plastics are formed by the effect of the ........ .

a. air
b. sun
c. water
d. soil

30 ........ is an area in the ocean where the small pieces of corals are nurtured.

a. Coral reefs
b. The nursery
c. Protectorate
d. Garden

31 ........ is one of the ways done by coastal communities to reduce plastic pollution.

a. Replacing wooden forks with plastic ones
b. Using grocery plastic bags
c. Using single-used plastics
d. Using cloth bags

32 All the following are affected by pollution, except ............ .

a. living organisms as human, plants and animals
b. non-living things as air, water and soil
c. all components of the ecosystem
d. dead organisms only

33 If the number of ............, the grass will increase in the ecosystem.

a. decomposers decreases
b. producers increases
c. primary consumers increases
d. primary consumers decreases

34 ............ are the top predators in their food chain.

a. Frogs
b. Birds
c. Alligators
d. Butterflies

35 Decomposers directly benefit from ............ and complete the food chain cycle.

a. water and fish
b. air and birds
c. dead organisms
d. soil and dead producers

36 All the following organisms depend on another organism to get their energy, except ............ .

a. predators
b. prey
c. green plants
d. b and c

37 A population change refers to the increase or decrease in ............ .

a. water and food resources
b. number of living organisms
c. the weather temperature
d. the water temperature

## 2 Complete the following using the words between the brackets:

1 ............ of the energy in dead prey are recycled to the soil. (10% – 90%)

2 ............ is a natural recycling factory. (Photosynthesis – Decomposition)

3 Corals in the marine food web are considered as ............ . (consumers – producers)

4. .................. is/are considered a healthy ecosystem. (Coral - Coral reefs)
5. Rabbits die quickly when .................. disappear from the ecosystem. (hawks - grasses)
6. .................. water is suitable for microorganisms. (Cold - Warm)
7. Corals .................. the seawater to get their food. (absorb - filter)
8. Micro-plastics are very harmful as they are not .................. . (toxic - nutritious)
9. A long food chain has a great number of .................. . (producers - consumers)
10. Gentle rain may .................. the desert ecosystems. (benefit - harm)
11. Habitat loss may .................. the ecosystems. (benefit - harm)
12. .................. water is healthy for microorganisms. (Cold - Warm)
13. Heavy rain may .................. the desert ecosystems. (improve - destroy)
14. Habitat restoration may .................. the ecosystems. (benefit - harm)
15. .................. of the energy in dead prey are transferred to predators. (10% - 90%)
16. Habitat loss for any living organism make them .................. . (go extinct - survive)
17. Decomposers recycle nutrients to .................. . (soil - air)
18. Coral bleaching means the coral color turns to .................. . (red - white)
19. Algae in the marine food web are considered as .................. . (consumers - producers)
20. The amount of rainfall has a strong effect on the .................. ecosystem. (marine - desert)

## 3 Put (✓) or (✗):

1. Heavy rain improves the desert ecosystem more than gentle rain. ( )
2. Energy remains in an ecosystem but it's transferred between its components. ( )
3. Living organisms always need non-living things in the ecosystem to survive. ( )
4. Coral reefs lose their colors when the water temperature decreases. ( )
5. A primary consumer could be a predator in its food chain. ( )
6. Humans are both primary and secondary consumers. ( )
7. The restoration process always takes a little time. ( )
8. When a plant dies, consumers may not be found in this short food chain. ( )
9. Overfishing is one of the most natural events that impact the marine ecosystem. ( )
10. Algae enter the tissue of corals when the water temperature increases. ( )
11. If the grass is removed from the desert, hawks will die quickly. ( )
12. It is better to use single-used plastic forks to reduce plastic pollution. ( )
13. Palau work with fishers to make sure they are not overfishing in coral reefs. ( )
14. Heavy rain in the desert causes the growth of more producers. ( )
15. The number of prey increases when the number of predators decreases. ( )
16. Increasing the number of primary consumers may make producers disappear. ( )

17. Secondary consumers may migrate if the producers are removed from the ecosystem. (   )
18. Microorganisms recycle back the important elements to water. (   )
19. When the water becomes warm, seabirds have to move for another cooler area. (   )
20. Habitat loss may cause extinction for any species of living organisms. (   )
21. Using plastic grocery bags is better than using cloth bags. (   )
22. Sea turtles and corals are always in danger due to plastic pollution. (   )

## 4 Write the scientific term for each of the following:

1. The first organism to be impacted by the death of the producer. (..........)
2. Organisms that return the energy back to the ecosystem. (..........)
3. The process of recycling the energy back to the ecosystem. (..........)
4. The producers of the marine food web. (..........)
5. A bird that builds its nest on the top cliff and depends on fish to get its energy. (..........)
6. A process in which humans can make new products from waste materials. (..........)
7. A phenomenon that happens to living organisms due to habitat loss. (..........)
8. A phenomenon that causes the coral to turn completely white. (..........)
9. A human activity that decreases the number of fish in the marine area. (..........)
10. Rays coming from the sun that cause the formation of microplastics. (..........)

11. The number of living organisms of one species. (..............................)
12. Organisms that break down the remains of dead organisms. (..............................)
13. It is from the most diverse marine ecosystems on Earth. (..............................)
14. Small pieces of plastic that formed due to the UV of the sun falling on it. (..............................)
15. The increase or decrease in the number of living organisms. (..............................)
16. The harm that affects air, water, or soil due to human activities. (..............................)
17. It is the returning of land and water back to how they were before harm was done. (..............................)
18. It is an area in the ocean where the small pieces of corals are nurtured. (..............................)
19. A way of life that coastal communities near the reefs have adopted. (..............................)
20. The suitable ecosystem for plant-community ecologists to make their researches. (..............................)

## 5 Classify the following organisms in this table:

Rabbit – Vulture – Hawk – Cockroaches – Bactria – Hyenas – Grass – Crabs – Algae – Houseflies – Alligator – Acacia tree – Slugs – Marine microorganisms – Earthworms – Frog – Human – Millipedes – Deer

| Producer | Consumer | Decomposer | Scavengers |
|---|---|---|---|
| .............................. | .............................. | .............................. | .............................. |
| .............................. | .............................. | .............................. | .............................. |
| .............................. | .............................. | .............................. | .............................. |
| .............................. | .............................. | .............................. | .............................. |

## 6 Choose from column (A) what suits it in column (B):

1

| Column (A) | Column (B) |
|---|---|
| 1 Gentle rains | a. harm the desert ecosystem. |
| 2 Heavy rains | b. reduces ocean pollution. |
| 3 Overfishing | c. improve the desert ecosystem. |
| 4 Recycling plastics | d. destroys the marine ecosystem. |

1 ............ . 2 ............ . 3 ............ . 4 ............ .

2

| Column (A) | Column (B) |
|---|---|
| 1 Photosynthesis | a. causes death or extinction of living organisms. |
| 2 Decomposition | b. is a way that is used to reduce plastic pollution. |
| 3 Restoration | c. means that the coral color turns to white. |
| 4 Zero plastics | d. releases oxygen in the air. |
| 5 Habitat loss | e. is recovering a shelter to animals. |
| 6 Coral bleaching | f. recycles nutrients to the soil. |

1 ............ . 2 ............ . 3 ............ .

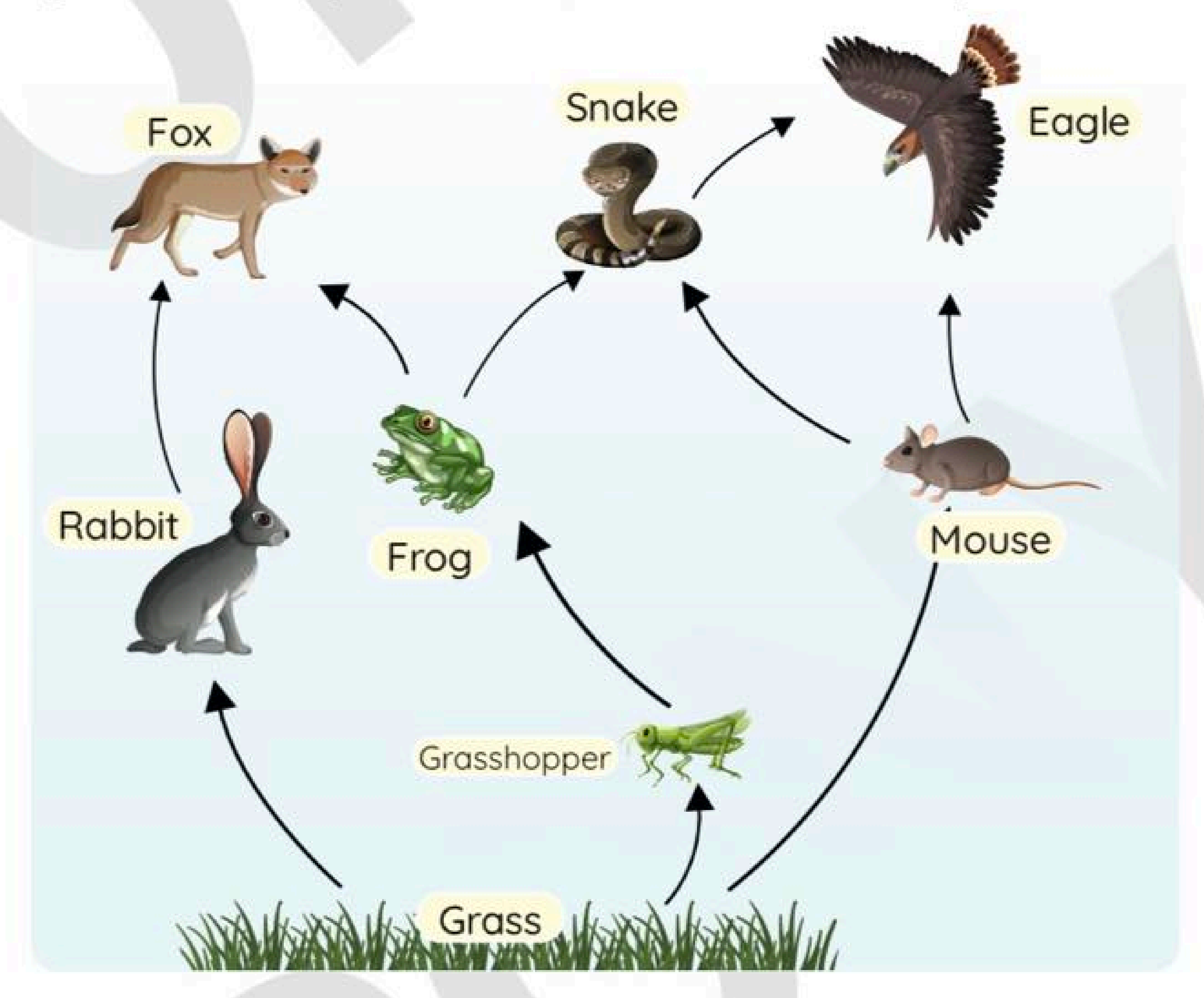
4 ............ . 5 ............ . 6 ............ .

## 7 Cross out the odd word:

1. Snails – Houseflies – Slugs – Earthworm (............)
2. Vultures – Crabs – Cockroaches – Fungi (............)
3. Grass – Algae – Bacteria – Marine microorganisms (............)
4. Algae – Rabbits – Whales – Corals (............)
5. Grass – Zooplankton – Fox – Mouse (............)
6. Overfishing – Floods – Microplastics (............)

## 8 Variant questions:

1 Study the following food web, then answer the questions:




**1 From this food web, complete the following to form three food chains:**

a. .................. → .................. → .................. .

b. .................. → .................. → .................. → .................. .

c. .................. → .................. → .................. → .................. → .................. .

**2 Complete the following sentences using the words between the brackets:**

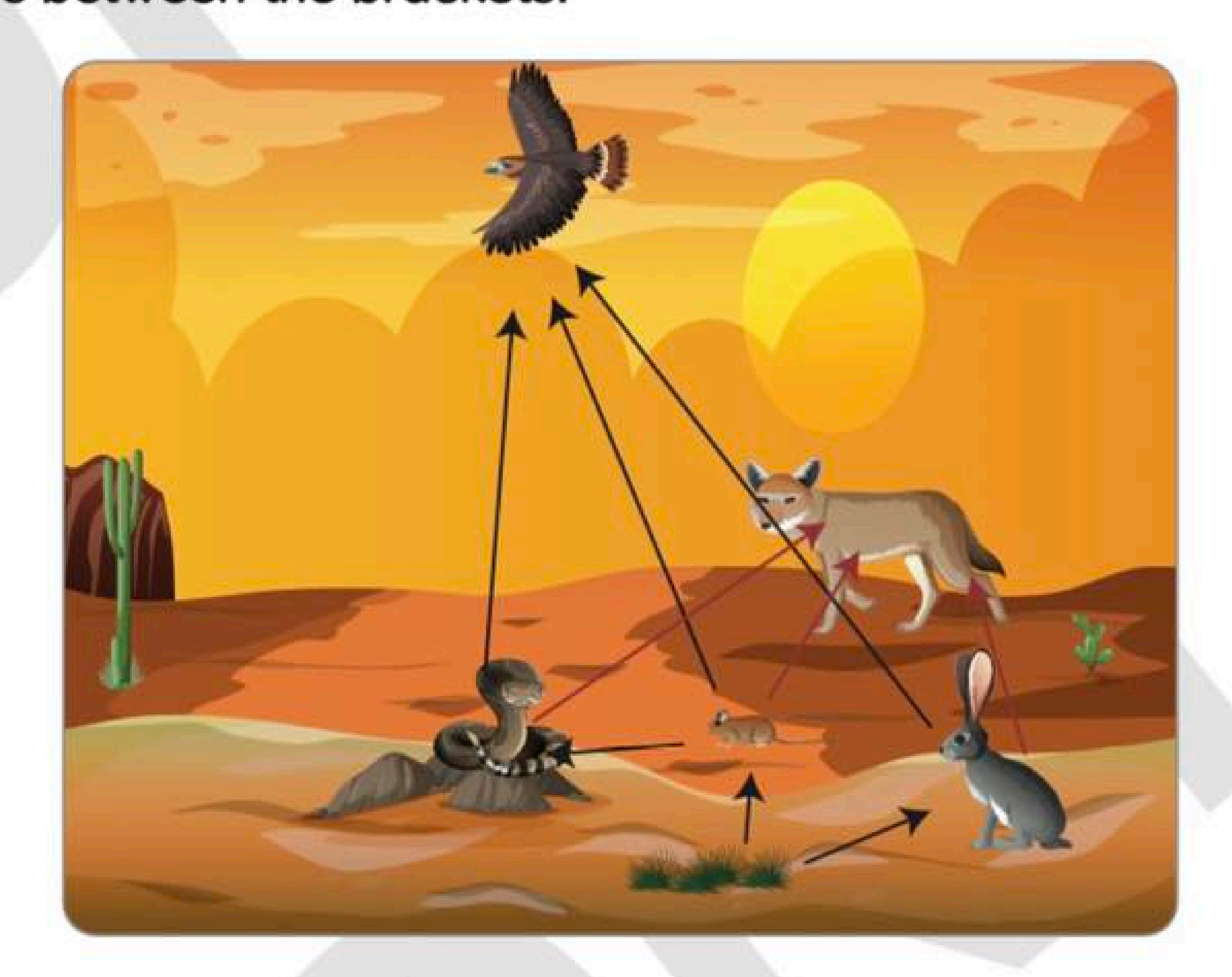
a. The number of primary consumers is .................. organisms. **(two - three)**

b. The .................. uses the energy of the sun to produce its own food. **(grass - eagle)**

c. The eagle is considered a tertiary consumer when eating the .................. . **(mouse - snake)**

d. The .................. may be a predator and prey in the same time. **(rabbit - frog)**

**2** **Study the following food web, then complete the sentences using the words between the brackets:**



a. If the population of rabbits increases, .............. may disappear. **(foxes - grass)**

b. The snake is considered a .............. consumer. **(primary - secondary)**

c. The rabbit provides energy to the .............. . **(eagle - grass)**

d. If the grass is removed, the mouse and rabbit will .............. . **(migrate - die)**

**3** **Study the following food web, then complete the sentences using the words between the brackets:**

C

B D

A E

a. Letter (..........) represents the producer. **(A - E)**

b. Letter (B) represents the .............. consumer. **(primary - secondary)**

c. Letter (C) is the tertiary consumer when it feeds on letter (..........). **(B - D)**

4 **Study the following figure, then answer the questions:**

a. What is the name of this phenomenon? ................................ .

b. Is this a healthy ecosystem? ................................ .

c. What is the reason of this phenomenon? ................................ .

## 9 Give reasons for:

1. Scavengers play an important role before the decomposition process.
2. Decomposition process is a nature's recycling factory.
3. Recycling process helps in decreasing pollution.
4. Increasing the number of one species of living organisms causes its death.
5. Palau Island manages land activities.
6. Gentle rain benefits the desert ecosystem.
7. Falling of heavy rain harms the desert ecosystem.
8. Microorganisms in water make the same role of grass in the desert.
9. The coral reef is the most diverse and valuable ecosystem.
10. Sometimes sea turtles feed on plastic pieces.
11. Increasing water temperature lead to coral bleaching.
12. Plastics are so harmful for the  marine ecosystem.
13. Microplastics have a bad effect on corals.
14. Restoration process helps to recover ecosystems.
15. The nursery plays an important role in the recovery of coral reefs.

## 10 What happens if:

1. Decomposers disappear in an ecosystem.
2. Increasing the number of secondary consumers.
3. Grass disappears from an ecosystem.
4. The number of one species increases so much.
   (Concerning food resources)
5. The number of predators increases so much.
   (Concerning number of prey)
6. Gentle rain falls in the desert.
7. Heavy rain falls in the desert.
8. The water becomes warm. (Concerning corals and microorganisms)
9. The climate change becomes unsuitable for living organisms.
10. The amount of plastics in water rises.

# Concept 4: Matter in the World Around Us

## 1 Choose the correct answer:

1. Which matter has a definite shape?
   a. Water b. Ice c. Oil d. Air
2. .................... can be poured in any container.
   a. Oxygen b. Juice c. Ice d. Air
3. Anything that has mass and occupies space is called .................... .
   a. energy b. force c. matter d. weight
4. Any matter exists in .................... state(s).
   a. one b. two c. three d. four
5. All the following examples represent solid states, except .................... .
   a. juice b. feather c. ice d. rock
6. All matter around us consist of .................... .
   a. cells b. particles c. nutrients d. proteins
7. Matter can be described by .................... .
   a. hardness b. color c. shape d. all the previous
8. Which of the following examples isn't a matter?
   a. Bird's feathers b. Cup of water
   c. Empty cup d. Bird sound
9. .................... is considered an invisible matter.
   a. Milk b. Air c. Father d. Sound
10. Cold milk and hot tea are similar in .................... .
    a. color b. temperature c. taste d. state
11. .................... are different matters but they exist in the same state.
    a. Water and ice b. Wood and air
    c. Milk and juice d. Air and water
12. .................... are same matters, but they exist in the different states.
    a. Wood and brick b. Oxygen and air
    c. Oil and tea d. Ice and water vapor

13. Tiny particles inside ........ move very freely.
    a. water b. air c. wood d. ice

14. You can measure your height using a ........ .
    a. balance b. thermometer c. ruler d. metric stick

15. Thermometer can be used to know the ........ of water.
    a. shape b. color c. temperature d. weight

16. Water is described by all of these properties, except ........ .
    a. we can pour it b. it occupies space
    c. it has a definite shape d. it takes the shape of the container

17. Which of the following matters has no texture?
    a. Feather b. Oxygen c. Water d. Ball

18. ........ has a definite size and an indefinite shape.
    a. Air b. Ice c. Water d. Wood

19. Some matters are very small and we cannot see them, such as ........ .
    a. water b. germs c. pencils d. insects

## 2 Put (✓) or (✗):

1. The state of matter can't be changed from one form to another. ( )
2. Matter exists everywhere around us in nature. ( )
3. The particles in ice move more freely than in water. ( )
4. Water always takes the shape of the container that it is poured in. ( )
5. Matter consists of tiny moving particles. ( )
6. Water vapor has no texture and it is a visible matter. ( )
7. Gases completely fill a closed container, such as when you blow a balloon. ( )
8. Ice melts into water by cooling it. ( )
9. Water has indefinite shape and size. ( )
10. Two objects can take up the same space at the same time. ( )

Revision

## 3 Write the scientific term:

1. Anything around us that has mass and occupies space. (..................)
2. They exist inside matter in a continuous motion. (..................)
3. A state of matter in which matter has a definite shape. (..................)
4. A state of matter that can be poured in a container. (..................)
5. A device that is used to measure the height of a boy. (..................)
6. A device that is used to measure the temperature of milk. (..................)
7. A device that is used to measure the mass of apples. (..................)
8. A process in which ice changes into water. (..................)
9. A process in which water changes into ice. (..................)

## 4 Complete the following sentences:

1. Matter is anything that has .................. and occupies space.
2. Matter can exist in .................. states that are .................., .................. and .................. .
3. Matter can be described by .................., .................. or .................. .
4. The .............. of particles inside matter can describe its state.
5. The particles inside .................. move very freely.
6. Light and sound are not .................., but they are considered forms of .................. .
7. .................., .................. and .................. are examples of gaseous states.
8. Water has .................. shape and .................. size.
9. Some matters are very small and we cannot see them, such as .................. or .................. .
10. .................. can be poured in a container and it takes .................. .

## 5 Cross out the odd word:

1. Oil – Milk – Feather – Juice (..................)
2. Wood – Ice – Oxygen – Iron (..................)
3. Air – Water vapor – Ice – Carbon dioxide (..................)
4. Water – Air – Light – Wood (..................)

## 6 Choose from column (A) what suits it in column (B):

1

| Column (A) | Column (B) |
| --- | --- |
| 1 Matter | a. is not a matter. |
| 2 Particles | b. is an invisible form of matter. |
| 3 Sound | c. exist inside the matter in a continuous motion. |
| 4 Oxygen | d. exists in three states. |

1 .................. . 2 .................. . 3 .................. . 4 .................. .

2

| Column (A) | Column (B) |
| --- | --- |
| 1 Solid state | a. has indefinite shape and definite size. |
| 2 Liquid state | b. has definite shape and size. |
| 3 Gaseous state | c. has indefinite shape and size. |

1 .................. . 2 .................. . 3 .................. .

3

| Column (A) | Column (B) |
| --- | --- |
| 1 Thermometer | a. is used to measure the height of a boy. |
| 2 Balance | b. is used to measure the temperature of hot tea. |
| 3 Measuring tape | c. is used to measure the mass of fruits. |

1 .................. . 2 .................. . 3 .................. .

## 7 Compare between the following:

| P.O.C | Solid | Liquid | Gas |
|---|---|---|---|
| Size | .................... | .................... | .................... |
| Shape | .................... | .................... | .................... |
| Texture | .................... | .................... | .................... |
| Motion of particles | .................... | .................... | .................... |
| Space between particles | .................... | .................... | .................... |

## 8 Study the following figure, then complete the following sentences:

| 1 | 2 |
|---|---|

1. Melting means that matter changes from figure (..........) to (..........).
2. In figure (..........), particles are very close to each other.
3. The particles in figure (..........) move more freely.
4. Both figures are same in .................... .
5. Both figures are different in .................... .

## 9 Give reasons for:

1. Air is a matter.
2. Air has no definite shape and volume.
3. Although gases are invisible, we can know they exist.
4. Solids can keep their shape.

## 10 What happens if:

1. Water is poured into a cup of water.
2. Ice cubes are exposed to heat.
3. Liquid changes into gas (Concerning the speed of particles).

# Guide Answers

## Science Exercises for November Syllabus



# Concept 2: Energy Flow in Ecosystems
# Concept 3: Changes in Food Webs

**1**

| | | | |
|---|---|---|---|
| 1 c | 2 b | 3 c | 4 b |
| 5 d | 6 a | 7 c | 8 b |
| 9 c | 10 a | 11 c | 12 b |
| 13 d | 14 c | 15 d | 16 c |
| 17 d | 18 b | 19 b | 20 a |
| 21 b | 22 c | 23 d | 24 c |
| 25 b | 26 a | 27 c | 28 d |
| 29 b | 30 b | 31 d | 32 d |
| 33 d | 34 c | 35 d | 36 c |
| 37 b | | | |

**2**

1. 90%
2. Decomposition
3. consumers
4. Coral reefs
5. grasses
6. Cold
7. filter
8. nutritious
9. consumers
10. benefits
11. harm
12. Cold
13. destroy
14. benefit
15. 10%
16. go extinct
17. soil
18. white
19. producers
20. desert

**3**

| | | | |
|---|---|---|---|
| 1 ✗ | 2 ✓ | 3 ✓ | 4 ✗ |
| 5 ✗ | 6 ✓ | 7 ✗ | 8 ✓ |
| 9 ✗ | 10 ✗ | 11 ✗ | 12 ✗ |
| 13 ✓ | 14 ✗ | 15 ✓ | 16 ✓ |
| 17 ✓ | 18 ✗ | 19 ✓ | 20 ✓ |
| 21 ✗ | 22 ✓ | | |

**4**

1. Primary consumer
2. Decomposers
3. Decomposition process
4. Algae
5. Seabird
6. Recycling process
7. Extinction
8. Coral bleaching
9. Overfishing
10. Ultra Violet Rays (UV rays)
11. Population
12. Scavengers
13. Coral reefs
14. Microplastics
15. Population change
16. Pollution
17. Habitat restoration
18. Nursery
19. Zero plastics
20. Prairie

**5**

| Producer | Consumer |
|---|---|
| 1. Grass | 1. Rabbit |
| 2. Algae | 2. Hawk |
| 3. Acacia tree | 3. frog |
| 4. Marine microorganisms | 4. Alligator |
| | 5. deer |
| | 6. Human |

| Decomposer | Scavengers |
| --- | --- |
| 1. Bactria | 1. Vulture |
| 2. Slugs | 2. Cockroaches |
| 3. Earthworms | 3. Hyenas |
| 4. millipedes | 4. Crabs |
| | 5. Houseflies |

**6**
1. 1 ⇨ c  2 ⇨ a
   3 ⇨ d  4 ⇨ b
2. 1 ⇨ d  2 ⇨ f
   3 ⇨ e  4 ⇨ b
   5 ⇨ a  6 ⇨ c

**7**
1. Houseflies
2. Fungi
3. Bacteria
4. Rabbits
5. Zooplankton
6. Floods

**8**
1. [1] a. Grass ⇨ Rabbit ⇨ Fox
   b. Grass ⇨ Mouse ⇨ Snake ⇨ Eagle
   c. Grass ⇨ Grasshopper ⇨ Frog ⇨ Snake ⇨ Eagle

   [2] a. three  b. grass
   c. snake  d. frog
2. a. grass  b. secondary
   c. eagle  d. die
3. a. E  b. secondary
   c. B
4. a. Coral bleaching
   b. No
   c. Increasing the temperature of water.

**9**
1. Because scavengers break down food into small pieces before the decomposition process.
2. Because decomposition process returns nutrients back to the soil again.
3. Because recycling process helps in producing new products from waste materials instead of throwing them in landfills.
4. Because as the number of one species of living organisms increases, the food and water resources may run out and so on they will die.
5. To control the quality of the marine ecosystem in it.
6. Because gentle rain helps producers to grow so the desert ecosystem improves.
7. Because falling of heavy rains may cause floods, so the grass dies and the desert ecosystem is destroyed.
8. Because marine microorganisms can make their own food.
9. Because the coral reef provides marine organisms with shelter and food.

10 Because sea turtles cannot know the difference between corals and plastic pieces.

11 Because when water becomes too warm:

1. Corals will get rid of the algae living in their tissues.
2. This causes the coral to turn completely white.
3. Bleaching events stress corals and often they do not survive.

12 Because plastic is not nutritious and it can also be toxic and sharp.

13 Because corals filter the seawater to get their food and they also ingest microplastics as the pieces of food that they are getting from the water.

14 Restoration process helps in restoring the land and water back to how they were before harm was done.

15 Because nursery is an area in the ocean where the small pieces of corals are nurtured until they can be moved back to the reefs where they were dying.

**10**

1 Dead things would build up, just like the trash in landfills.

2 The number of primary consumers will decrease.

3 Primary consumers will die first, while other consumers may migrate or die.

4 Food and water resources will run out and disappear.

5 The numbers of prey decrease.

6 Producers will grow and the desert ecosystem is improved.

7 Floods occur, so producers will die and the desert ecosystem is destroyed.

8 When the water becomes warm:

1. Corals will get rid of the algae living in their tissues and their color turns completely white which stress corals and often they do not survive.
2. Marine microorganisms will move toward an area where the water is cooler.

9 The population of species will decrease by them moving to another place or dying.

10 Plastic will cause damage to the marine life and affect marine organisms negatively.

# Concept 4: Matter in the World Around Us

**1**
1. b 2. b 3. c 4. c
5. a 6. b 7. d 8. d
9. b 10. d 11. c 12. d
13. b 14. d 15. c 16. c
17. b 18. c 19. b

**2**
1. ✗ 2. ✓ 3. ✗ 4. ✓
5. ✓ 6. ✗ 7. ✓ 8. ✗
9. ✗ 10. ✗

**3**
1. Matter 2. Particles
3. Solid state 4. Liquid state
5. Metric stick
6. Thermometer
7. The balance
8. Melting process
9. Freezing process

**4**
1. mass
2. three – solid – liquid – gas
3. shape – color - texture
4. movement 5. gas
6. matter - energy
7. Water vapor – oxygen gas – carbon dioxide gas
8. indefinite - definite
9. germs - air
10. Water – the shape of the container

**5**
1. Feather 2. Oxygen
3. Ice 4. Light

**6**
1. 1 ⇨ d 2 ⇨ c
3 ⇨ a 4 ⇨ b
2. 1 ⇨ b 2 ⇨ a
3 ⇨ c
3. 1 ⇨ b 2 ⇨ c
3 ⇨ a

**7**

| P.O.C | Solid | Liquid | Gas |
|---|---|---|---|
| Size | Definite | Definite | Indefinite |
| Shape | Definite | Indefinite | Indefinite |
| Texture | Smooth | Moist | No texture |
| Motion of particles | Move only a little bit | Move more freely | Move very freely |
| Space between particles | The particles are packed tightly with each others. | The particles have more space. | The particles have a lot of space. |

**8**
1. 1 to 2
2. 1 3. 2
4. matter
5. state

**9** ① Because air has mass and occupy space.

② Because the particles inside air have a lot of space between them and they move very freely.

③ Because they completely fill a closed container, such as when you pump air into a bicycle tire tube.

④ Because particles inside solids are close to each other and they move only a little bit.

**10** ① Water will take the shape of the container.

② Ice will be changed from the solid state into the liquid state.

③ The speed of the particles will increase and they will move very freely.

# November Tests

## Test 1

**1 A) Complete the following with an answer from brackets:**

1. The interconnected food chain is called a/an .................... . (food web - ecosystem)
2. Energy transfers from the sun to producers reaching the .................... stage. (predation - decomposing)
3. Vapor that rises from a boiler placed on the stove is an example of a .................... state. (gaseous - liquid)
4. Sound and light are considered a form of .................... . (matter - energy)

**B) What happens if...:**

- The amounts of plastics in the marine environment increase?

..................................................................................................... .

**2 A) Put a (✓) for the correct statement and a (✗) for the incorrect statement:**

1. Scavengers feed on the remains of dead plants and animals after cutting them into small pieces. ( )
2. Sea turtles feed on jellyfish. ( )
3. Air polluted by smoke can destroy the food web. ( )
4. Particles of liquids are close together and move slowly. ( )

**B) Food webs explain the relationship between living organisms more than food chains. Give reason.** ..................................................................................... .

**3 A) Choose the correct answer:**

1. The decomposers decompose .................... .

   a. plants only
   b. animals only
   c. both plants and animals
   d. sunlight

2. When water becomes warm, the coral color changes into .................................. .

a red
b black
c green
d white

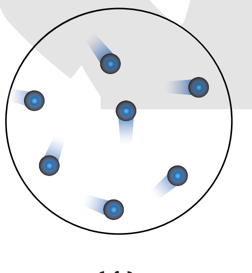
3. The occurrence of drought in lakes causes .................................. in the ecosystem.

a stability
b balance
c disturbance
d strength

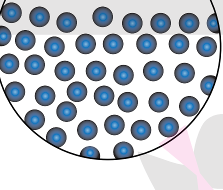
4. The juice you drink for breakfast is an example of .................................. matter.

a solid
b liquid
c gaseous
d frozen

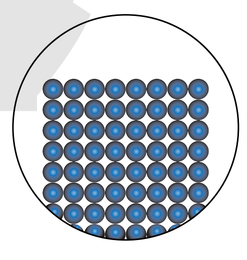
**B) Which of the following pictures shows the shape of particles in a gaseous substance?**



(1)



(2)



(3)



# Test 2

**1 A) Complete the following with an answer from brackets:**

1. The growth of mushrooms on soil represents a .................................. process. (predation - decomposition)
2. When the grass disappears in the desert, .................................. are directly affected.. (rabbits - foxes)
3. The particles of gaseous substances move .................................. . (freely - slowly)
4. .......................... keep their shape unless something causes them to change. (Liquids - Solids)

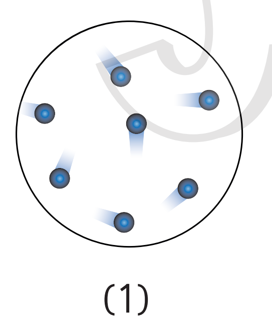
**B) Human interference in the environment is one of the reasons for changing the natural habitats.**

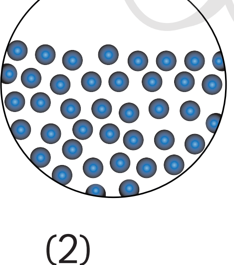
**Give reason.** .................................................................................................................................................. .

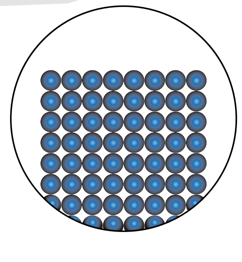
**2 A) Put a (✓) for the correct statement and a (✗) for the incorrect statement:**

1. When the water becomes warm the algae hides in the coral reefs. ( )
2. The corals filter the ocean water in order to get their food. ( )
3. Gases occupy any closed container they are placed in. ( )
4. Matter occupies space. ( )

**B) Which of the following pictures shows the shape of particles in a solid substance?**


(1)


(2)


(3)





3 A) **Choose the correct answer:**

1. Nutrients return back to the soil due to .................................... .
   - a) producers
   - b) consumers
   - c) predators
   - d) decomposers

2. When goats feed on grass and tigers feed on goats, this is an example of
   ............................. .
   - a) photosynthesis
   - b) the digestion process
   - c) a food web
   - d) a food chain

3. Plastics break down into smaller pieces by ............................ rays.
   - a) infrared
   - b) ultraviolet
   - c) green
   - d) yellow

4. Which of the following doesn't represent matter?
   - a) Computer
   - b) Sound
   - c) Juice
   - d) Air

B) **What happens if..:**

- The seeds of some plants are dispersed by wind?

  .......................................................................................................................................... .

# Test 3

**1 A) Complete the following with an answer from brackets:**

1. Plant seeds that are dispersed by wind are .................................. seeds. (sticky - light)
2. Consumers migrate to search for food when .................................. disappear. (decomposers - producers)
3. Seabirds dive deep down into the sea to .................................. . (build their nests - search for small fish)
4. Ice cubes that are placed in drinks represent a .......................... state. (solid - liquid)

**B) What happens if..:**

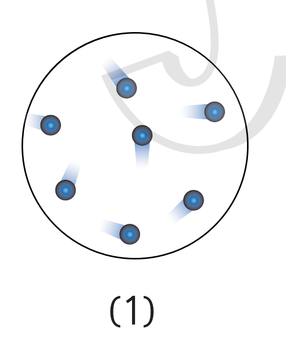
- The coral reefs disappear?

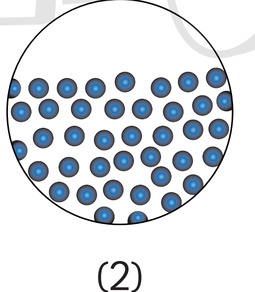
.................................................................................................................................................................. .

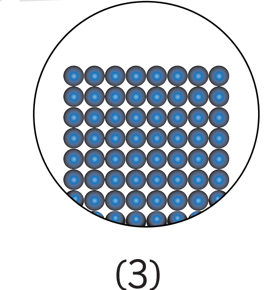
**2 A) Put a (✓) for the correct statement and a (✗) for the incorrect statement:**

1. Waste can be reduced by recycling. ( )
2. The food web contains all the components that make up the food chain. ( )
3. The pencil is made up of tiny particles. ( )
4. Iron and oil are similar as they are both gaseous substances. ( )

**B) Which of the following pictures shows the shape of particles in a liquid substance?**


(1)


(2)


(3)

**3 A) Write the scientific term that each phrase indicates:**

1. A group of interconnected food chains. ( .............................. )
2. Small living organisms which complete the process of decomposition and feed on the remains of dead plants and animals. ( .............................. )
3. An area in the ocean where small parts of coral reefs are nurtured. ( .............................. )
4. Everything that has a mass and occupies space. ( .............................. )

**B) Vinegar takes the shape of the container in which it is placed.**

**Give reason.** ........................................................................................................ .



# Test 4

**1 A) Complete the following with an answer from brackets:**

1. Plastic products are broken into small pieces due to ultraviolet rays emitted from the .................................. . (sun - moon)
2. Seabirds feed on .................................. . (microorganisms - small fish)
3. The energy of solid particles is .................................. the energy of liquid particles. (less than - more than)
4. The glass cup represents a .............................. state. (solid - liquid)

**B) What is the tool used for measuring temperature?**

................................................................................................................................ .

**2 A) Put a (✓) for the correct statement and a (✗) for the incorrect statement:**

1. A food web is formed of many food chains linked together in the ecosystem. (   )
2. When the water becomes warm the algae hides in the coral reefs. (   )
3. When moving water from a pot to another, its shape changes. (   )
4. Its possible to see the particles of vapor rising from a pot over a flame. (   )

**B) Vultures are considered scavengers.**

**Give reason.** ................................................................................................................................ .

**3 A) Write the scientific term that each phrase indicates:**

1. Animals that may feed on plants only or both plants and animals. ( .............................. )
2. Pollution that happens as a result of throwing plastic wastes in the ocean. ( .............................. )






3. An incoherent state of matter that can spread to fill any container in which it is placed. ( .................................. )

4. A matter that has no fixed shape and can be poured. ( .................................. )

**B) What happens if..:**

- Decomposers disappear from the ecosystem?

.............................................................................................................................................................................. .

# Test 5

**1 A) Complete the following with an answer from brackets:**

1. Houseflies are considered .................................. . (decomposers - scavengers)
2. ........................... is one of the main reasons for the extinction of living organisms. (Building nature reserves - The loss of natural habitats)
3. Small fish move to a new habitat upon the death of ................................ . (microorganisms - seabirds)
4. Measuring tape is used to measure ............................. . (mass - length)

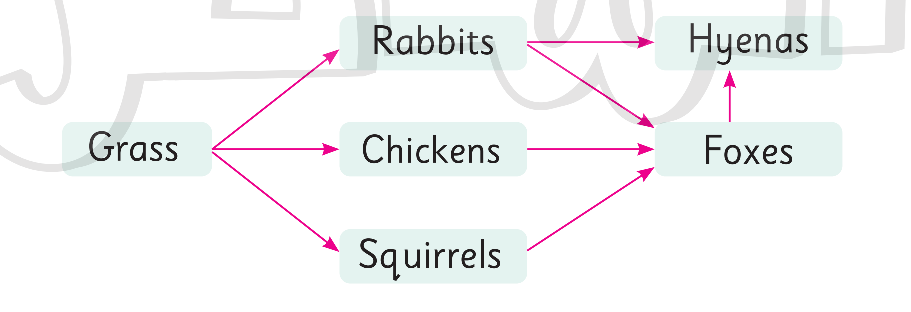
**B) Sea turtles eat a lot of plastic wastes believing that it is jellyfish.**

**Give reason.** ........................................................................................................ .

**2 A) Put a (✓) for the correct statement and a (✗) for the incorrect statement:**

1. Light and rough seeds stick to human clothes without being noticed. ( )
2. Microplastics help the food web to last in the marine environment. ( )
3. The matter is composed of large particles. ( )
4. The particles of the gaseous matter move faster than the particles of the solid and liquid matter. ( )

**B) What does the following shape represent?**




........................................................................................................ .

**3 A) Choose from column (A) what suits column (B):**

| (A) | (B) |
|---|---|
| 1. Bacteria get energy from | (   ) a) the water temperature rises. |
| 2. If there's heavy rain in the desert | (   ) b) the ecosystem may be damaged. |
| 3. Coral bleaching occurs when | (   ) c) the ecosystem may be improved. |
| 4. Sea water, drinks and rain | (   ) d) feeding on the remains of dead organisms. |
| | (   ) e) are forms of liquid matter. |

**B) Materials can be described by many properties.**

**Mention two of them.**

.............................................................................................................

............................................................................................................. .



# Answers

## Test (1)

Q 1: A)

1. food web 2. decomposing 3. gaseous 4. energy

B) - Damaging the marine environment.
- Affecting organisms living there negatively.
- Destroying the marine food web.

Q 2: A)

1. ✓ 2. ✓ 3. ✓ 4. ✗

B) Because they show the interactions between many food chains, unlike the food chain which shows the relationship between a few organisms.

Q 3: A)

1. both plants and animals 2. white 3. disturbance 4. liquid

B) Shape (1)

## Test (2)

Q 1: A)

1. decomposition 2. rabbits 3. freely 4. Solids

B) Because man constructed roads and buildings, and because of dumping waste into water and overfishing.

Q 2: A)

1. ✗ 2. ✓ 3. ✓ 4. ✓

B) Shape (3)

Q 3: A)

1. decomposers 2. food web 3. ultraviolet 4. Sound

B) They fly long distances to a new natural environment to grow.

## Test (3)

Q 1: A)

1. light 2. producers 3. search for small fish 4. solid

B) A lot of marine organisms, such as fish lose their habitat and food source.

Q 2: A)

1. ✓ 2. ✓ 3. ✓ 4. ✗

B) Shape (2)

Q 3: A)

1. Food web 2. Decomposers 3. Nursery 4. Matter

B) Because vinegar is a liquid

## Test (4)

**Q 1: A)**

1. sun  2. small fish  3. less than  4. solid

**B)** The thermometer

**Q 2: A)**

1. ✓  2. ✗  3. ✓  4. ✗

**B)** Because they feed on dead animals and plants.
Or: Because they break food down into small pieces.

**Q 3: A)**

1. Consumers  2. Plastic pollution  3. The gaseous state  4. The liquid matter

**B)** Nutrients do not return to the soil again.

## Test (5)

**Q 1: A)**

1. scavengers  2. The loss of natural habitats  3. microorganisms  4. length

**B)** Because they don’t know the difference between jellyfish and pieces of plastic in the water.

**Q 2: A)**

1. ✗  2. ✗  3. ✗  4. ✓

**B)** A food web

**Q 3: A)**

1. d  2. b  3. a  4. e

**B)** Volume – shape – color – texture – temperature – degree of hardness






# Lesson (3)

- **FOOD CHAIN**

Primary Consumer
Grasshopper
Secondary Consumer
Frog
Sun
Water
Grass
Producer
Food Chain
Snake
Tertiary Consumer
Fungi
Hawk
Decomposer
Final Consumer

- **FOOD WEB:**
- **It is a model that shows many different feeding relationships among living organisms**
- **The ways in which many food chains interact within an ecosystem form a food web.**




# WORKSHEET (3)

## Q.1 Choose the correct answer

1. All the following are types of food for primary consumers, except

a. grasses. b. seeds. c. fruits. d. eagles.

2. Both animals and humans bodies

a. can absorb sunlight to make their own food.

b. cannot absorb sunlight to make their own food.

c. breathe carbon dioxide gas.

d. don't need water to drink.

3. A hawk can eat…………….. when snakes are completely disappear from an ecosystem.

a. grasses b. grasshoppers c. birds d. leaves

4. It is better for any predator to depend on………………………………to get its energy and survive.

a. one species of consumers only

b. many species of consumers

c. one species of decomposers only

d. many species of decomposers

5. All types of plants are similar in all the following characters, except they……………………………………

a. are able to make photosynthesis process.

b. are eaten by primary consumers.

C. can feed on predators.

d. live in different types of ecosystems

6. Human is a …………………… living organism.

a. producer

b. consumer

c. decomposer

d. predator

7. Secondary consumers can eat only………………

a. decomposers. b. producers.

c. Primary consumers. d. tertiary consumers.

# Lesson (4)

## Food webs in neighborhood

***Design a model of a food web by using the following cards that show different type of living organisms.***

***Tools***

*Living organism's cards.*







***Step (1)***

*Classify the animals in the pictures above according to the type of food that each animal eats.*

***Observation***

*The mouse and rabbit eat the green plant.*

*The snake eats the mouse.*

*The eagle eats the mouse, rabbit and snake.*

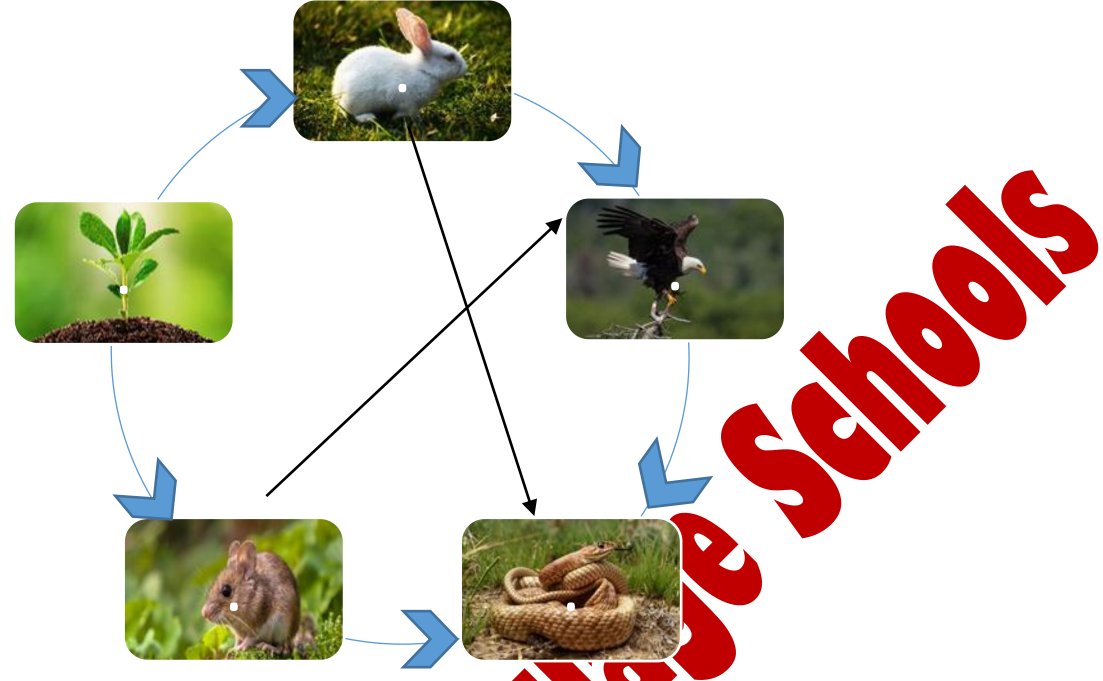
***Step2***

*Draw a food web using arrows to show the suitable food for each animal.*

***Observation***

*According to the previous steps, we can draw the food web:*





## Conclusion

- ***Food web is a model that describes energy flow and feeding interactions between living organisms in an ecosystem.***
- ***Food webs show that different organisms in an ecosystem are connected to allow energy to pass between them to survive, where:***
- ***Producers are eaten by some consumers.***
- ***Some consumers are eaten by other consumers.***
- ***Some consumers may eat the same producer or prey.***



# Worksheet (4)

**Q1.Complete the following sentences using the words below:**

***(Primary consumers - food web - food)***

***1. We cannot make a food web, if we don't know the types of………… that the………animals eat.***

***2. The interconnected food chains are known as…………….***

***3. An eagle can eat rabbits and mice, which are considered as……………***

**Q2. Study the opposite food web, then choose the correct answer:**

***1. This food web starts with***

**Which are producers.**

***a. human***

***b. plant***

***c. animal (A)***

***d. animal (B)***

Plant

Animal (A)

Animal (B)

Human

***2. Human can get energy from……….***

***a. plant and animal (B).***

***b. animal (A) only.***

***c. plant only.***

***d. plant and animal (A).***

***3. Energy cannot flow directly from the producer to………………***

***a. human and animal (A).*** ***b. human and animal (B).***

***C. animal (B) only.*** ***d. animal (A) only.***



*4. The living organism that gets energy directly and indirectly from the producer, is*

*a. animal (A).* *b. animal (B).*

*c. plant.* *d. human.*

*5…………….is considered as a primary and a secondary consumer at the same time.*

*a. Plant* *b. Human*

*c. Animal (A)* *d. Animal (B)*

*Q3.Study the Following figure, then choose the correct answer below*





*Plant*



*Grasshopper*



*Frog*



*Snake*

*Which of the following, is necessary for survival of all living organisms?.......*

*a. Plant.* *b. The Sun.* *c. Grasshopper.* *d. Snake.*



# Lesson (5)

## What are decomposers?

- *Decomposers are organisms which make one of the most important processes on the Earth which is called "decomposition process "*



*Mushroom fungus*



*Bread mold fungus*

- *Decomposition process happens to all dead organisms as follows:*

| First | Second |
|---|---|
| *When animals and plants die, there are animals called "scavengers" eat these dead organisms and break them down into smaller pieces.* | *Decomposers complete the process of decomposition by breaking down the smaller pieces of remains of dead plants and animals into nutrients that can be returned to the ecosystem so, Plants can use these nutrients to make their own food.* |




## Waste and dead organisms

### 1. Waste:

- *There are only one way that people use to reduce these waste materials and trash Known as "Recycling".*
- *In recycling process people use the waste materials and make new products instead of going into a landfill.*







### 2. Dead organisms

*When organisms die, decomposers undergo decomposition process to release nutrients back into the environment so, they can be used again.*



*Example:*

*Remains of animals and plants are decomposed and become part of the soil, which is used by plants to make their own food.*

*Notes*

*1. Decomposition process is considered as nature's recycling factory.*

*2. Decomposition process takes place on land and also underwater*

# Worksheet (5)

## Q1.Put (√) or (x):

1. Food web shows interaction between many living organisms. ( )
2. Nutrients that present in living organisms bodies returned to the ecosystem after death. ( )
3. Both of bread mold fungus and house fly are decomposers. ( )
4. Scavengers decompose dead plants and animals into nutrients that can be returned to the ecosystem. ( )
5. Producers form their own food, while decomposers return nutrients back to the ecosystem. ( )
6. At the beginning of decomposition process, decomposers break dead organisms down into smaller pieces. ( )
7. Decomposers include mushroom fungus and slugs. ( )
8. Recycling of waste materials reduces pollution and the size of landfills.( )
9. Both of bread mold and mushroom are two types of bacteria. ( )

## Q2. Write the scientific term of each of the following:

1. It is a process through which the nutrients found in dead organisms bodies return back to the ecosystem.

   (………………..)
2. They are organisms that feed on dead organisms bodies and break them down into smaller pieces.

   (………..……..)
3. They are organisms that break down the remains of dead plants and animals into nutrients that return to the ecosystem.

   (………………)
4. It is a process through which humans can make new products from waste materials.

   (………………)



## Q3. Complete the following sentences:

**1. The interaction among many food chains is known as……………**

**2. Decomposition process done by two types of living organisms, which are…………. organisms and……………… organisms.**

**3. Nutrients that are resulted from decomposition process and returned back to the soil, can be consumed again by……………….**

**4. Snails, earthworms and slugs are considered as ……………., while vultures, crabs and cockroaches are considered as………….**

**5. Decomposition process takes place on land as well as under…………**

**6. Bread mold and mushroom are two types of…………….**

**7. It is better to …………..waste materials than throwing them in an ecosystem.**



# Lesson (6)

**Ecologist:** *They are the scientists who work on restoration projects to Have a stable environment for plants to survive.*

**Prairie:** *it is suitable ecosystem for plant community ecologists to do their researches.*

**Restoration ecology:** *means rebuilding habitats that are damaged.*
✶*It helps animals to increase their number.*
✶*restoration ecology positively affects human health.*

✱*Human and engineers must share scientists in restoration ecology.*
✱*Restoration projects must include restoring of shelters, food and water resources.*

**Seed Dispersal**

- *The transport and (disperse) of plant's seeds to grow in environments.*

## ✶Ways help plants to disperse their seeds:

**Water - air – animal and human bodies - wind**

## ✶Types of seeds:

- *1-**Sticky seeds** : that stick to human clothes or an animal's body. So human or animal can carry these seeds to another place where seeds fall down.*
- ***2-Small light seeds** : that are dispersed by wind, these seeds fly away to new habitats to grow in other places.*



## Worksheet (6)

### Q1 Choose the correct answer:

1. Restoration ecology means……………...

a. damaging the rebuilt habitats.

b. rebuilding habitats that are damaged.

c. throwing plastic products in seas.

d. throwing plastic products in deserts.

2. Restoration ecology helps animals to……………….

a.move away to another ecosystem.

b. adapte to damaged ecosystem.

c. decrease their number.

d. increase their number.

3. All the following ways help plants to disperse their seeds, except………...

a. water. b. air. C. animal bodies. d. sunlight.

4. Plants with sticky seeds need... …... to stick to disperse and grow in a new habitat.

a. air b. water

c. light energy from the Sun d. body of a living organism.

5. Wind play an important role in dispersing seeds…………..

a. small light b. big heavy c. sticky d. floating



## Q2 Put (√) or (X):

*1. People and engineers must share scientists in restoration ecology. ( )*

*2. Restoration ecology negatively affects human health ( )*

*3. Restoration projects must include restoring of shelters, food and water resources. ( )*

*4. All plants need the same way to disperse their seeds. ( )*

*5. Both of small light seeds and big heavy seeds can disperse by wind.( )*

## Q3 Write the scientific term of each of the following

*1. They are scientists who work on restoration projects to have a stable environment for plants to survive. (………………)*

*2. Organisms that use human clothes or animal bodies or even wind to disperse their seeds to new habitats. (………………)*

*3. The suitable ecosystem for plant-community ecologists to do their researches. (……….………)*



# Concept 1.3 Change in food webs:

## Lesson (1)

### The ecosystem affected by:

1- Pollution.

2- Climate changes.

3- Human activities.

**Pollution:** it is the harms happen to air, water and soil due to human activities.

### The effects of environmental changes on the food web?

1- The disappearance of producer: make consumers migrate to search For food.

2- The presence of a large number of one type of organism: make their Food disappear.

### Protection of the ecosystem:

**Protection the marine environment in Palau Island:**

**Control the human activities on land by:**

1- Avoid water pollution (when throwing waste materials in ocean.

2- Prevent overfishing (catching many fish from rivers, seas and ocean.

**Note:** if an ecosystem changes the food webs will change.

**-If there is a gentle rain in the desert ➡ the desert ecosystem may be improved (*Give reason*)**

**Because rainwater will feed the plants.**

**-If There is a heavy rain in the desert ➡the desert ecosystem may be harmed. (*Give reason*)**

**Because the water of heavy rain will cause flooding.**



-If there is a drought and all the grass dies ➡ the food web in the ecosystem may be destroyed. (G.R)

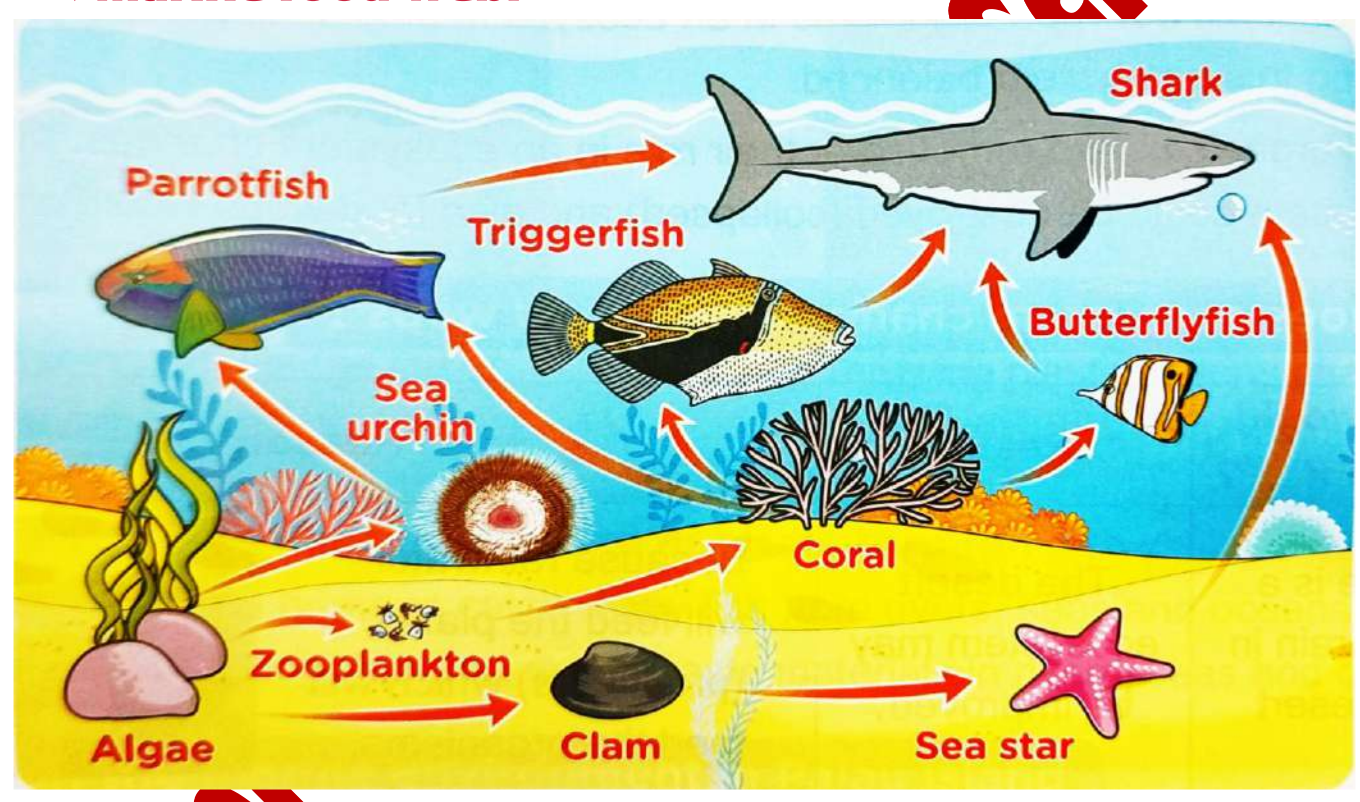
Because the plants will die and also the organisms will die.

- If there are many top predators in the food web ➡ the other organisms in the food web like lions, tigers and sharks may be harmed. (Give reason)

because the top predators will eat all the organisms.



## ✶Marine food web:




- Algae ➡ clam ➡ sea star ➡ shark
- Algae ➡ zooplankton ➡ coral ➡ butterfly fish ➡ shark
- Algae ➡ zooplankton ➡ coral ➡ tiger fish ➡ shark
- Algae ➡ zooplankton ➡ coral ➡ parrot fish ➡ shark
- Algae ➡ sea urchin ➡ parrot fish ➡ shark



# Worksheet (1)

➢ **Choose the correct answer:**

1- On extreme hot climate, the water of a lake ….
A) Increases due to evaporation.
B) Decreases due to evaporation.
C) Changes into ice.
D) Has a lower temperature.

2- All the following are human activities that affect a marine ecosystem, except……..
A) Flooding.
B) Throwing human wastes.
C) Overfishing.
D) Throwing plastic garbage.

3- All the following are top predators, except ……….
A) Hawks.
B) Tigers.
C) Butterfly fish.
D) Lions.

4- The marine food web usually started with……….
A) Calm
B) Algae.
C) Zooplankton.
D) Parrotfish.

5- If calm are completely removed from a marine ecosystem, the survival of …………. May be affected.
A) Tiger fish
B) Sharks
C) Sea urchin
D) Sea stars



➢ **Put (✓) or (x) :**

- Overfishing is one of the climate changes that affects the marine ecosystem. (   )
- It is better to recycle the waste materials than throwing them in rivers and seas. (   )
- What is happening on land doesn't affect what is happening in marine ecosystem. (   )

➢ **What happens if…?**

1- Throwing big amounts of plastic garbage and waste materials in water.

…………………………………………,………………………………………
…………………………………………………………………………………………
……………………………………………………………,………………………
……………………

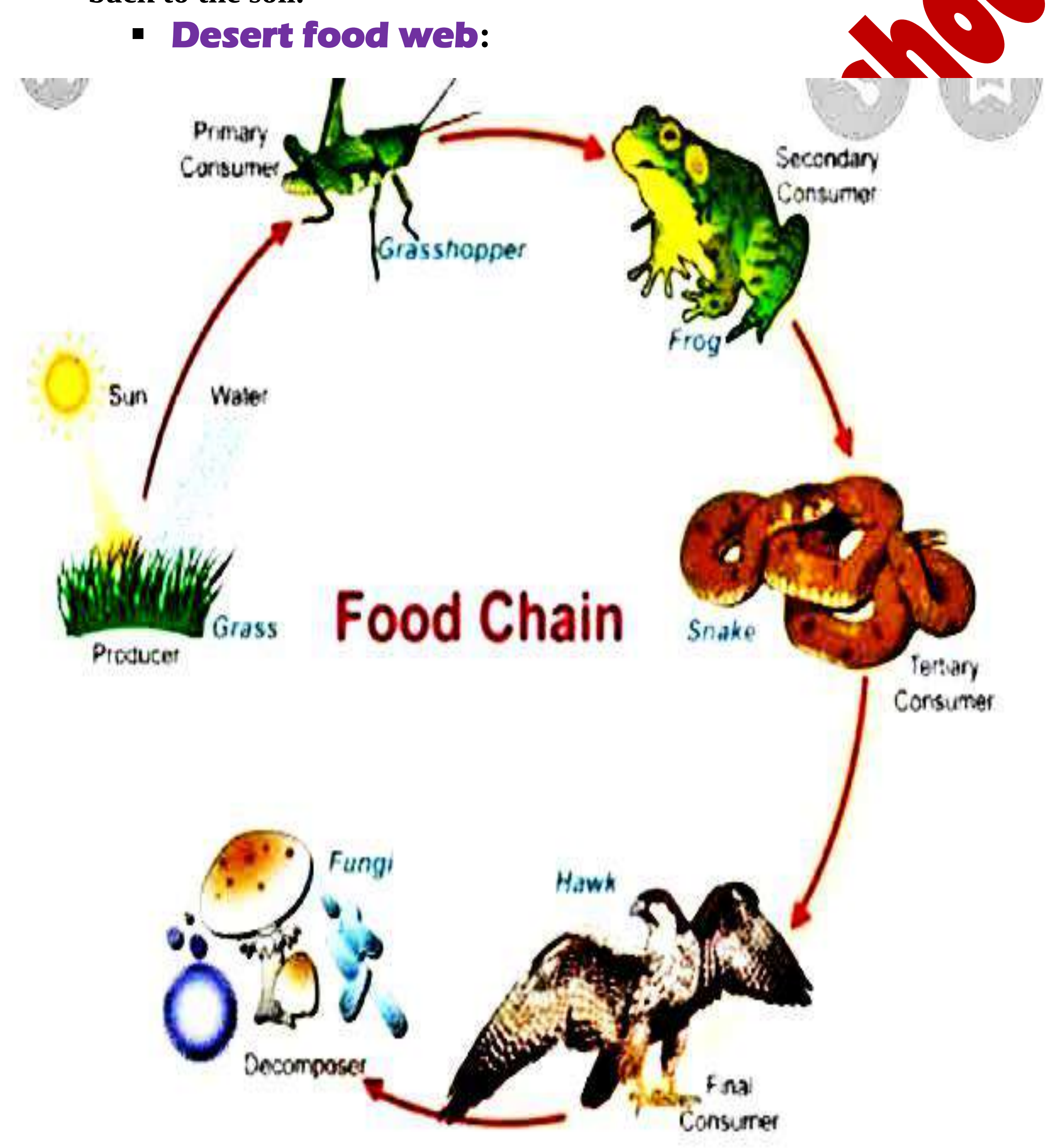
2- A small lake is exposed to extreme hot climate for several months.

………………………………………………………………………………………
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…………………………………………………………………………………………
………………………….

## Lesson (2)

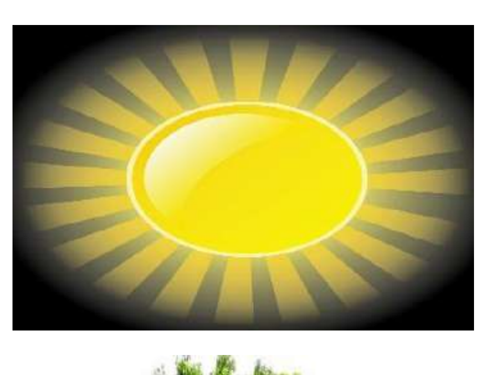
# Energy flow

- **Energy can't be created or destroyed but it transfers.**
- **The first source of energy is the sun, then energy transfers to plants (producer ), then transfers to (consumers) that when they die the (decomposers) convert them into simple substances and return the energy back to the soil.**
    - **Desert food web**:





- The sun transfers energy to producers until it reaches the decomposers, as follows:



✓ **The sun is the main source of energy.**



✓ **Producer: green plants**

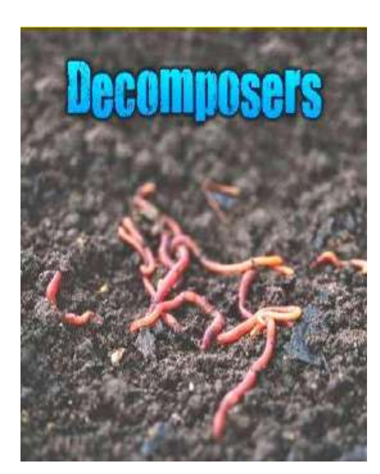


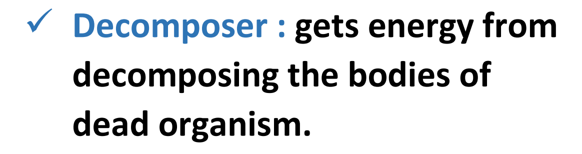
✓ **Primary consumer:** **energy transferred to the primary consumer when it feeds on plants.**





- ✓ **Secondary consumer:** **energy transferred to the secondary consumer when it feeds on primary consumer.**



- ✓ **Decomposer : gets energy from decomposing the bodies of dead organism.**



- The energy in the overall system remains as the same ,where :
  - 10 % only of this energy transfers between living organisms when an organism feeds on the other.
  - 90 % of this energy is left to decomposers which return this energy back to the soil.



# Worksheet (2)

## ➢ Write the scientific term of each of the following :

1. They are consumers which feed on secondary consumers. (                )
2. They are living organisms that include bacteria and fungi, which return energy back to the soil.    (                        )

## ➢ Complete the following sentences:

**1-** Predators of living organisms may be ……… for other living organisms.

**2-** A predator gets ……………………. From the prey which feeds on.

## ➢ Put (✓) or ( x) and correct the wrong answer:

1) 90 % of the in a food web transfers between living organisms when an organism feeds on the other.    (   )
2) The soil fertility depends on decomposers.            (   )
3) The sun produces energy that decomposers use to make their food. (   )

## ➢ Choose the correct answer:

1) Decomposers play an important role in returning the energy back to all the following, except ………………..

A) the air
B) The soil
C) The water
D) The decomposers

2) In a food chain, the energy transfer ……………

A) From a predator to a prey.
B) From a prey to a predator.
C) From a predator to a producer.
D) From a consumer to a predator.

3) It is better for a predator in a food web, to have …………

A) Only one type of decomposers.
B) More than one type of decomposers.
C) Only one type of prey.
D) More than one type of prey






# Pollution

- Pollution effect on food webs (G.R) because if an animal exposed to pollution and dies, it affects all other levels of the food web.

- **Forest fire produces smoke and ash that are spread all over the forest and cover the grasses, causes difficulty breathing of animals.**

- **Pollutants produced from forest fire harm: (air, grasses, animals , respiratory system).**

- **Leakage of oil into seawater negatively affects the marine organisms.**

## Population changes

- **Population: it is the number of organisms of one type of species living in an area.**

- **Factors affect the population:**
  - ✓ **increasing or decreasing the amount of water.**
  - ✓ **increasing or decreasing the temperature.**
  - ✓ **Climate change.**

- We know that all species depend on other species for survival, so an increase or decrease in one species affect the population causing **population change.**









❖ Example:

| Microorganisms (producer) ➡ small fish ➡ seabirds |
|---|

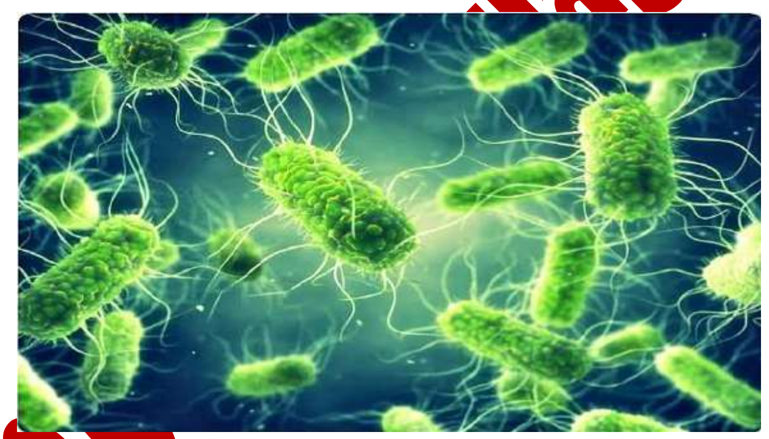
✸Seabirds feed on small fish, the small fish feed on microorganisms that float on the surface of the sea.

✸Seabirds build their nests on the topof mountain cliffs.

**Note:**

✓ **Microorganisms:**

- ✸**They are too small organisms that can't be seen by eyes.**
- ✸ **They are producers in the marine food web.**
- ✸**They make their own food and live in cold water habitats.**



➢ **If water temperature increase, microorganisms will move search for colder water then small fish search for microorganisms that lead to death of sea birds.**

# Worksheet (3)



## Give reasons for:

**1-If the temperature of water increase the sea birds will die.**

**……………………………………………………………………**

**2-Food webs can be destroyed due to pollution.**

**……………………………………………………………………**

## Write the scientific term of each of the following:

**1-They are organisms that are too small for people to see with only their eyes . ( )**

**2-It is the number of organisms of one type of species live in an area. ( )**

**3-It is the harms that happen to air, water or soil by substances that can harm living organisms. ( )**

## Study the following two diagrams, then put (✓) or ( x) :

Microorganisms → Small fish → Seabirds

Diagram (A)

Algae → Small fish → Seabirds
Small fish → Sharks

Diagram (B)

1. Both diagrams (A) and (B) show two food webs. ( )
2. In diagram (B), both of seabirds and sharks are secondary consumers. ( )
3. In diagram (A), if small fish are removed, the seabirds are negatively affected. ( )
4. There is a food relationship between seabirds and sharks, where each of them can eat the other. ( )
5. In diagram (B) if sharks are removed, the seabirds population may be decreased. ( )



# Lesson (4)

## Habitat loss

- **Healthy habitats are important to all organisms in food web (G.R):** because they provide organisms with resources that they need to survive.
- **When these habitats are destroyed, different organisms may not be able to survive.**

❖ **Example of habitat loss in a coral reef system :**

**Coral reef:**

✓ **Some of the most diverse and valuable ecosystem on earth.**

✓ **they provide food and shelter for large numbers of fish and other marine organisms .**

✓ **They are important for tourism.**



➢ **Coral bleaching : ( G.R )**

**When water is very warm, coral reef will get rid of the algae living in their tissues it make coral reefs turn completely into white.**



➢ **The result of coral bleaching:**

- ✓ **Fish and other marine that depend on coral reef for food and shelter may die.**
- ✓ **People that depend on coral reefs and for food will be negatively affected.**

**Notes:**

- ➢ **Human activities can affect the ecosystem by :**
- ➢ **Building up more buildings.**
- ➢ **Throwing waste materials in water.**
- ➢ **Overfishing in seas and oceans.**



# Plastic pollution:

- Plastic in sea affect marine life, where whales, sea turtles, sea birds and fish can't often differentiate between real food and plastic.
- Sea turtles can't differentiate between a jelly fish and plastic so it eat a lot of plastic and get harmed.
- Coral reefs harmed by feeding on plastic due to the effect of UV rays which break down the plastic into micro plastic which look like the food of coral reefs.



# Worksheet (4)

## • Choose the correct answer:

1- Healthy marine environment is important for survival of …….

A) Humans
B) Lions
C) Fish
D) Deers

2- When water temperature increases, algae leave tissues of ……... so they become bleached.

A) Seabirds
B) Coral reefs
C) Calm
D) Sharks

3- Both of sea turtles and ………… Are present in the same marine food chain.

A) Deers
B) Jelly fish
C) Eagles
D) Tigers

4- When coral reefs……………the seawater, they may ingest micro plastics.

A) Evaporate
B) Filter
C) Cool
D) Warm

## • Write the scientific term of each of the following:

1) It is a condition in which coral reefs turn completely into white.

( )

2) Small pieces of plastic in the size of rice grains and they cause harms to marine organisms.

( )



3) It is a process that people can do for plastic waste materials Instead of throwing them in the seas and oceans. (                    )

- **Complete the following sentences using the these words:**

**(Toxic – overfishing – shelter – extinction – predator)**

1- Healthy natural resources include clean air, healthy food, water and suitable…………………

2- The human activity that directly decreases the marine population is ………………..

3- Habitat loss is not only decrease marine population but also it is one of the main causes of ………………

4- When a sea turtle Eats a jelly fish, this means that the sea turtle is a ………………….

- **Give reasons for :**

1- Coral bleaching happens when the water temperature rises.

……………………………………………………………………

…………………………………………………………………

2- Both of rising water temperature and ingesting micro plastic are harmful for coral reefs.

………………………………………………………………………………………………

……………………………



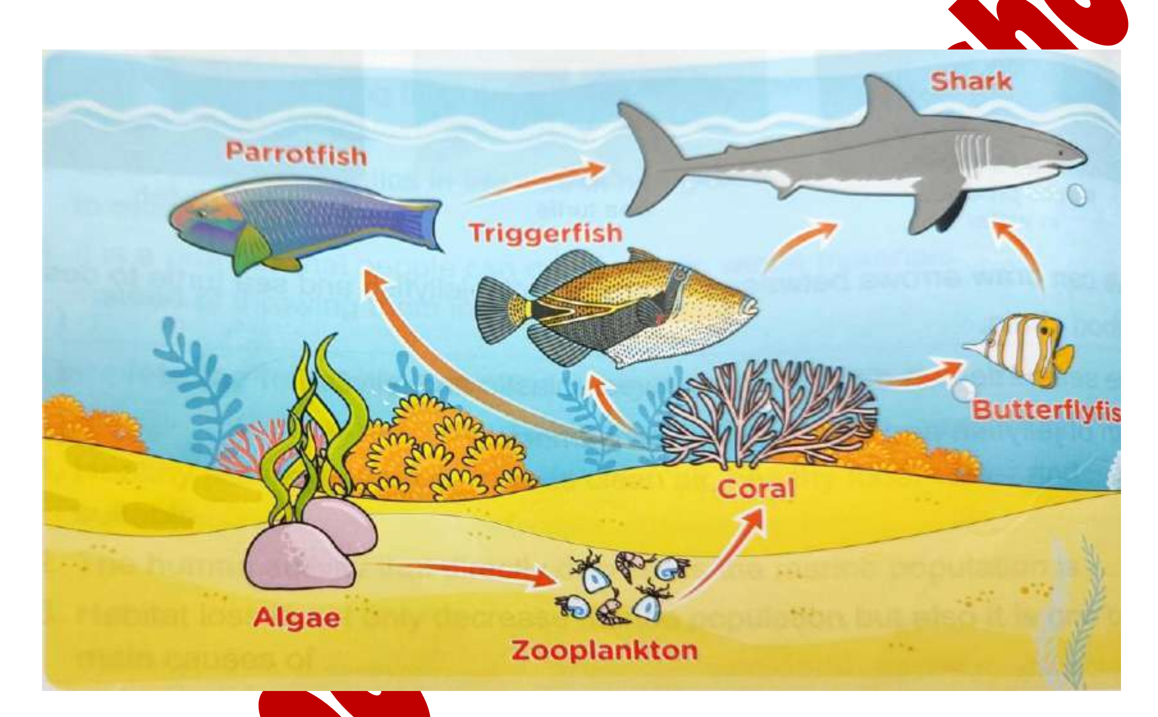
# Lesson (5)

## Impact on a food web

➢ **The importance of coral in Marine food webs :**

✓ **Food for a variety of primary consumers.**

✓ **Shelter for many organisms in the sea.**




➢ ***If the coral reefs disappeared the marine ecosystem will destroyed. ( G.R )***

✓**Because the parrot fish, tiger fish and butter fly fish will not have nothing to eat so they will die.**

✓**The shark will find a small amount of food to eat so it will die.**

✓**The algae that live in coral tissues will lose their habitats.**



# Worksheet (5)

- **Put ( ✓ ) or ( x ) :**

1- If coral reefs are destroyed, many marine food chains will be destroyed. ( )

2- Primary consumers and predators in seas and oceans are negatively affected by rising water temperature ( )

3- Coral reefs depend on butterfly fish for food and shelter. ( )

- **Choose the correct answer:**

1- Coral reefs Are considered as resources of ……….

A) Food only.
B) Shelter only.
C) Food and shelter.
D) Food and pollution.

2- Algae in coral reefs provide food for ……….. directly.

A) Primary consumers.
B) Second consumers.
C) Producers.
D) Predators.

3- Coral reefs bleaching negatively affects ……….. directly

A) Parrot fish only.
B) Tiger fish only.
C) Butterfly fish and sharks.
D) Parrot fish and tiger fish.



# Lesson (6)

## Habitat Restoration

- **Habitat Restoration: it is the process of returning a habitat back to its natural state before harm was done.**

✓ **Habitat Restoration projects** try to repair all parts of the habitat.
✓ **Most of habitat restoration projects require a lot of work and take a long time.**

❖ **Example :**

**Rebuilding coral reefs: (a coral reef rehabilitation project)**

**✓scientist collect small parts of different coral species and then move them to a nursery.**

- **Nursery: is an area in the sea, where scientists take care of small pieces of coral until they grow up.**
- **Protecting coral reefs from plastic pollution:**

**In Egypt, coastal communities near the coral reefs applied a new way of life known as a (zero plastic) where people can:**

✓ **Replace plastic forks with wooden ones.**
✓ **Replace plastic bags with cloth ones.**



# Worksheet (6)

- **Put (✓) or (x) :**

1) Citizens must share in returning a habitat back to its healthy conditions before harm was done ( )
2) Nursery is a natural habitat in the sea, in which coral reefs continue growing and reproducing ( )
3) People near the coastal areas must replace plastic bags with cloth one. ( )

- **Write the scientific term of each of the following:**

1- It is an area in the sea, where the scientists take care of small pieces of coral until they grow up. ( )

2- A process of returning a habitat back to its natural state before harm was done. ( )

- **Choose the correct answer:**

1- Habitat Restoration projects allow scientists to ……….that occur to an ecosystem.

A) Increase harms.
B) Decrease harms.
C) Keep harms.
D) Increase damage.

2- The place in which we can take care of small pieces of coral until they grow up is known as ……………

A) Food chain
B) Food web
C) Grassland
D) Nursery

3- All the follow processes show coral reefs in healthy conditions, except……………

A) Growing
B) Bleaching
C) Reproducing
D) Filtration



4- Zero plastics projects that is applied in Egyptian coastal communities, means that the using of plastic products decreases by ……….

A) 0%
B) 10 %
C) 90 %
D) 100%

- **Give reasons for :**

It is better to keep natural resources healthy than applying restoration projects.

……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………



# UNIT (2) CONCEPT 2 .1 LESSON.1

# MATTER



-Matter:

It is anything that has a mass and takes up space (has a volume)

## States of water:

1-Gas state:

Such as: Air- Water vapor(steam)- Carbon dioxide- Oxygen



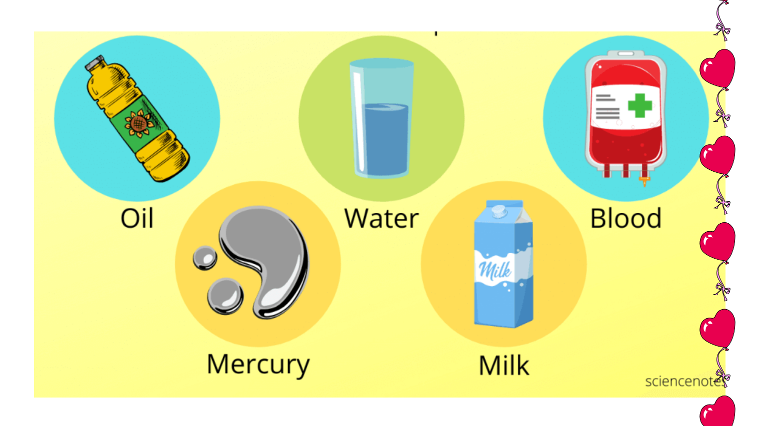

2-Solid state:

Such as: Ice- Gold- Wood




3- Liquid state:

Such as: Oli- Water- Milk- Vinegar





**Note**: -Water can be found in the three state.

-To describe any matter, we must know it's properties like: shape ,volume, color, hardness and texture.

## Properties of matter include:

### 1-Color:

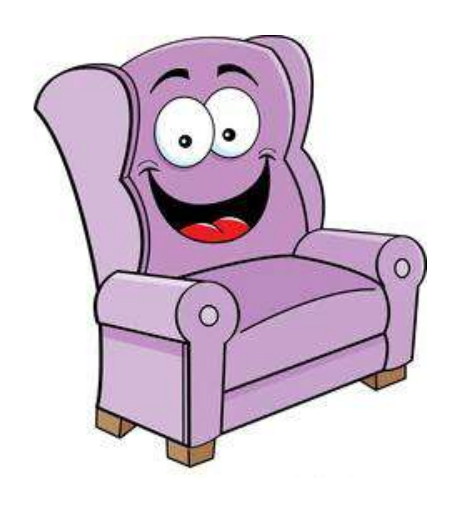
-One color



-Many color



-Colorless (no color)









### 2- Size (volume):

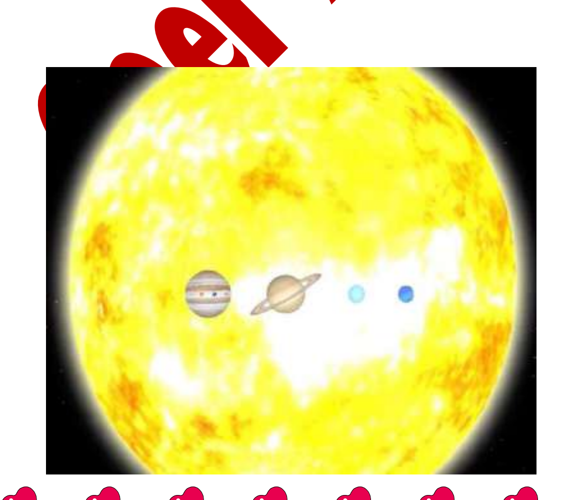
-Big

- Small

-Tiny that you can't see them



Such as germs







### 3-Temperature:

Property of matter by which we can distinguish between hot and cold).

**Hot** **Cold**



### 4-Shape:

**Round** **Square**



## 5- Hardness:

**Property of matter by which we can distinguish between hard and soft.**

-Hard like a brick

-Soft like a feather.





## Worksheet (1):

### Q.1- Write the scientific term of each of the following:

**1-Property of matter by which we can distinguish between hard and soft (..............................)**

**2-The state of water after its boiling (................................)**

### Q.2- Choose the correct answer:

**1-Matter can be found in..............States.**

**a.8 b. 2 C.3 d.1**

**2- The amount of space that a matter takes up is called..........**

**a. volume b. mass c. area d. weight**

**3-Both ......... and .......... have the same state of matter**

**a. oil-plastic. b. wood-water. c. iron-milk. d. wood-plastic**

**4-water can be found in a solid state in the form of....................**

**a. sea water b. steam c. ice d. boiling water**

### Q.3-what happen if.........?

**Water is frozen in the freezer (according to the state of water after freezing.**

**..........................................................................................................**

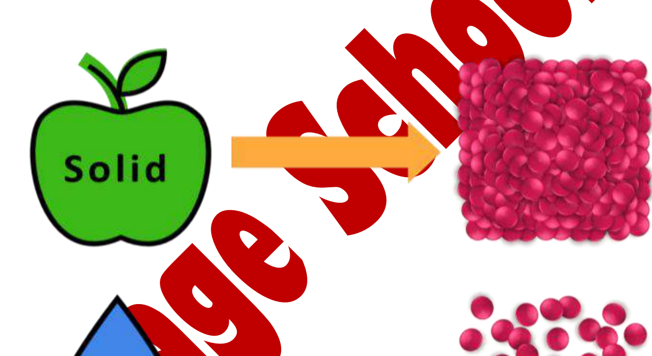


# Lesson (2) Observing Matter

- **Solids: Have definite (fixed) volume and shape.**
- **Liquids: Have definite volume but they don't have definite shape so, they take the shape of their containers.**
- **Gases: Definite no volume and shape, so they take the volume and shape of their containers.**

## The particles of all Matter

### 1-Particles of solid matter:




- They are very close to each other (packed tightly).
- They have less energy.
- They move only a little bit.

### 2-Particles of liquid matter

- They have more spaces.
- They have more energy
- They can move more freely.

### 3-Particles of gases matter




- They have a lot of spaces.
- They have a lot of energy
- They move very freely

**Note: There are some things that are not matter as light and sound which are forms of energy.**

**Note: -**

**We can measure the length of some matter using ruler or measuring tape.**

- We can measure the mass of matter using a scale.

- Matter can change from one state to another such as from solid to liquid by melting, from liquid to solid by freezing.



# Worksheet (2)

## Q.1-Give reasons for:

1- Oxygen has no definite shape or volume.

.......................................................................................................

2- Stone has definite shape and volume.

.......................................................................................................

3- Vinegar is a liquid matter.

.......................................................................................................

## Q.2-Put (✔) or (X) and correct the wrong one:

1. All forms of matter have volume.(      )

.......................................................................................................

2. Liquids don't take the shape of the container that they are placed in. ( )

.......................................................................................................

3 Both oil and wood have definite shape.(      )

.......................................................................................................

4.On transferring water from one pot to another,its volume will change.(    )

.......................................................................................................

5. Light and sound are forms of matter. (      )

.......................................................................................................

## Q.3- Choose from column (A) what suits it in column (B):

| A | B |
|---|---|
| 1. Gasoline<br>2. Carbon dioxide<br>3. Sand | a) Its particles have medium energy. (        )<br>b) Its particles are packed tightly. (        )<br>c) Its particles do not at all. (        )<br>d) Its particles move freely. (        ) |



# Lesson (3)

## States of Matter

### 1-The shape of solids matter:

- They have a definite (fixed) shape.
- Their shape do not change unless Something is happening to change them.

Diamond

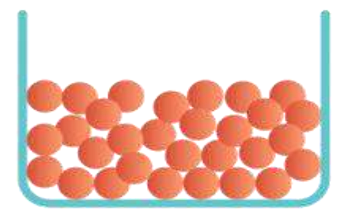
Atoms in a solid



### 2-The shape of liquids matter:

- They do not have definite shape.
- They take the shape of their containers.

Glass of Juice



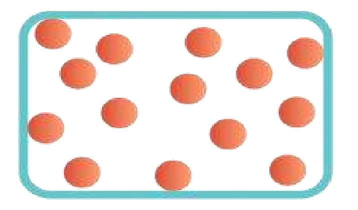
Atoms in a liquid

Air



### 3-The shape of gases matter:

- They do not have definite shape.
- They completely fill their containers and take their shapes.



Atoms in a gas




## What is Matter?

**Matter is something that you can:**



**1-Feel:**

Such as: **Air**





**2- See:**

Such as: **Pencil**



3- Smell:

Such as: Flower



# Worksheet (3)

## Q.1-Cross out the odd word:

1- **Steam- Oxygen- Gasoline- Air** (…………………………)

2- **Vinegar- Aluminium- Gold- Wood** (…………………………)

3- **Ball- Air- Pencil- Table** (…………………………)

## Q.2- Complete the following sentences:

1- ……………………..**are known as the building units of matter.**

2- **Particles of** …………………….. **are held more loosely, than particles of solids.**

3- **The shape of** …………………… **do not have definite shape.**

4- **Matter is something that you can**……………………, …………………… **and** ……………………

5- **Particles of** ……………………**move very quickly in all directions.**

## Q.3-What happens if…..?

**Solid changes into liquid.** **(according to the speed of particles)**

……………………………………………………………………………………………………………

# November revision G.5

# 2022-2023

## Q.1: choose the correct word :

1. **Decomposers are found at the ………… of the food chain. (beginning - end)**
2. **……………… are decomposing organisms. (Plants-Fungi)**
3. **Julius produce waste that is rich in …………………… . (nutrients - glucose)**
4. **Producers obtain energy directly from ……………… . (the sun - air)**
5. **are organisms that do not feed on other organisms. (Consumers - Producers)**
6. **…is transmitted from prey to predator in the food chain.(Only energy - Food and energy)**
7. **Snakes are considered prey for ……………… . (rat - hawks)**
8. **……………… is/are an example of scavenger organisms. (Eagles - Bacteria)**
9. **Flies in the house are considered ………… creatures. (decomposer - scavengers)**
10. **When bacteria disappear from a stable ecosystem, it will be ………… (stable- disturbed)**
11. **Plant seeds that are spread by wind are ……………… seeds. (sticky - light)**
12. **When the producer organisms disappear from an environment, the consuming organisms will ………… (migrate to other places - stay in its place)**
13. **When there are large numbers of one species of living organism, the food resources ……………… after a period. (increase - disappear)**
14. **When there are large numbers of one species of living organism in ecosystem, it ……………………… . (get stronger - may die of hunger)**
15. **If there is gentle rain in the desert,the desert ecosystem may … (improve - be damaged)**
16. **Producers and consumers die in the desert due to …………………… .**
    **(the occurrence of drought - the increase in the number of predators)**
17. **Seabirds dive into the depths of the sea to …… (build their nests - search for small fish)**
18. **Microorganisms are found at the ……………… of marine food chain.**
    **(beginning - end)**
19. **Microorganisms move to another environment when the water becomes …**
    **(cold - warm)**

**20. Small fish move to a new habitat upon the death of ……………… (microorganisms - seabirds**

**21. Plastic products are broken into small pieces due to ultraviolet rays emitted from ……………………… . (sun - moon)**

**22. Plastic particles has ……………… nutritional value of marine organisms such as whales and turtles. (large - zero (non) )**

**23. Ice cubes that are placed in water are in a …………………… state. (solid - liquid)**

**24. Solids and liquids both have a ………………… . (definite volume - definite shape)**

**25. The air we breathe is an example of a …………………………… state. (solid - liquid - gaseous - frozen)**

**26. Particles are in a …………………………… state. (static - motion)**

**27. The …………………………… determines the state of matter. (number of particles - movement of particles)**

**28. Gases occupy ……………………… space than solids. (more - less)**

**29. Gas particles have a ……………………… volume. (large - small)**

**30. Water freezes into ……………………………… . (ice - water vapor)**

**31. Matter consists of ……………………………… . (waves - particles)**

**32. The walls and tables in your classroom are in a ……………………… state. (gaseous - solid)**

**33. ……………………… has particles that are close to each other. (Oxygen - Iron)**

**34. A bicycle tire is a ………………………………… . (solid - gas)**

**35. Solid particles are ……………………………… each other. (close to - far from )**

**36. Solid particles allow matter to …………………………… . (keep its shape - take the shape of its container)**

**37. Liquid particles allow matter to ……………………… . ( keep its shape - take the shape of its container)**

**38. Particles in the liquid state……………………………… . (move very fast - are static)**

**39. Particles in the gaseous state ………… (move very fast - don't move from place to another)**

**40. Earth can be seen from a ……………………………… . (sailing ship - space satellite)**

**41. ……… is a process that preserves vegetables and keeps them fresh. (Evaporation - Freezing)**

# Q.2 : Complete the following statements :

1. primary consumers feed on …………
2. Earthworms and Julius are Examples of ………………..
3. Julius feed on ……………………………………………………………………
4. The snail is one of the ……………creatures, while the crab is one of the …………
5. The seeds of plants that are scattered by the wind are………… to move for long distances.
6. The disappearance of………… organisms affects all living things in the food web.
7. the ecosystem may………… ,If there is heavy rain in the desert,
8. If drought occurs, and all the grass in the desert dies, so the food web may ……
9. Energy is transferred from ………….to producers until reaches to ………….process
10. ………………… project is an example of the restoration of natural habitats that take place in the Arabian Gulf.
11. ………..is important for the needs of living organisms to survive.
12. …………… phenomenon causes damages coral reefs and causes their extinction.
13. Some matters can be hard, such as ........ and some matters are soft, such as .......
14. ……………………… and……………. are both characteristics of matter
15. …………. matter has definite shape.
16. ……… state can be compressed
17. Water vapor is an example of a……state, while snow is an example of a….state
18. Solid particles are linked together by a …………. attraction force.
19. Liquids and gases both have ……………..shapes

# Q.3: Correct the underline words :

1. Decomposers are located at the center of the food chain.
2. Consumer organisms help in soil fertility.
3. snake is considered a prey when it feeds on the rat ,.
4. Bread mold fungi are producer organisms.
5. The lion is considered one of the producers.

6. **<u>Decomposers</u> are organisms that get their food from producer organisms.**
7. **The lion is one of the <u>decomposing</u> creatures.**
8. **The seeds of <u>light</u> and coarse plants stick to human clothes without being noticed**.
9. **When one type of living organism increases too much, the food resource <u>increases.</u>**
10. **The marine environment on the island of Palau shall be protected by establishing well-designed <u>nurseries</u> in its waters.**
11. **Organisms in the desert food web are damaged when the numbers of predators are <u>stable.</u>**
12. **Energy is recycled back into the ecosystem by <u>consuming</u> organisms.**
13. **Seabirds build their nests on the <u>water surface</u>**
14. **Microorganisms in the marine environment are considered <u>primary consumers</u>.**
15. **Sea birds feed on <u>sharks</u>.**
16. **Bleaching of coral reefs occurs when the water temperature <u>decrease.</u>**
17. **Plastic materials analysis under the effect of the <u>moon</u>.**
18. **Corals get food in <u>turbid</u> waters.**
19. **<u>Gas</u> particles are close to each other.**
20. **Particles of solid matter move <u>quickly.</u>**
21. **Particles of liquid matter move <u>freely.</u>**
22. **The attraction force between <u>solid</u> particles is very weak**
23. **Particles of a solid state are very <u>far apart.</u>**
24. **Particles in a liquid state move much faster than particles in a <u>gaseous state</u>.**
25. **Particles in a <u>gaseous</u> state do not usually move from one place to another.**
26. **Gas particles move <u>slowly.</u>**
27. **Water vapour is an example of matter in a <u>solid</u> state.**
28. **The three states of water are solid, liquid, and <u>dew</u>**

# Q.4: Put ( √ ) or ( X )

1. **Decomposers organisms break food into smaller pieces. ( )**
2. **Waste can be reduced through recycling. ( )**
3. **Sweating organisms feed on dead organisms after cutting them into small pieces. ( )**
4. **The disappearance of producers does not affect consuming organisms.( )**
5. **The food web contains all the components that make up the food chain. .( )**
6. **When pollution occurs on land, it does not affect marine organisms. .( )**
7. **The quality of the marine environment on the island of Palau can be closely monitored by the management of land activeities. .( )**
8. **some organisms die, When any change occurs in the ecosystem.( )**
9. **The shark feeds on the butterfly fish, which feeds on coral. ( )**
10. **Energy remains in the system as it, despite its transfer between living organisms. ( )**
11. **When all rabbits die of hunger, the rest of the living organisms within the food web are affected. ( )**
12. **Air pollution with smoke may destroy the food web. ( )**
13. **Energy is transmitted from microorganisms to small fish and from there to sea birds. ( )**
14. **Human activity may affect the weather and non-living things in the ecosystem. ( )**
15. **a limited number of living organisms Lives inside and around the coral reefs.**
16. **Sometimes coral reefs are the shelter to many other coral reefs.( )**
17. **Plastic particles has a size of a grain of rice. ( )**
18. **Plastic particles may cause poisoning of marine organisms. ( )**
19. **The sea turtle eats a lot of plastic, thinking it is a jellyfish. ( )**
20. **When coral reefs are polluted, the entire ecosystem may destroyed.**
21. **rain fall one of the causes of loss of habitat ( )**
22. **Plastic is a suitable food for many marine organisms.( )**
23. **Studying the properties of matter is unimportant. ( )**
24. **Human bodies are considered matter. ( )**
25. **Matter can be multi-colored or colorless. ( )**
26. **Matter can be changed from one state to another. ( )**
27. **Two objects can occupy the same space at the same time. ( )**

**28. Liquids keep their shape unless acted upon by an external force. ( )**

**29. Matter occupies space. ( )**

**30. Pencils are made of micro particles. ( )**

**31. Gas particles are coherent. ( )**

**32. The spaces between liquid particles differ from the spaces between gaseous particles. ( )**

## Q5: Choose the correct answer from the brackets :

**1 - The food web in the ecosystem is not affected when …………**

**(Change in the environment - disappearance of producers - increase in the number of a species of living organisms - adaptation of organisms to the environment)**

**2- The following reasons destroy the desert ecosystem except ……..**

**(Light rain - heavy rain - drought and death of all grass - increase number of predators)**

**3- Seabirds search for food…………………..**

**(At the top of the mountain cliffs - by diving in the depths of the sea - by floating on the surface of the sea - in warm water)**

**4- When water is very warm……………..**

**(Algae close to coral reefs – the coral turns completely white – the reef is dying – the reef expels algae from its tissues)**

**5- Coral bleaching affects…………………**

**(coral reef population - fish population - human population - all of the above)**

**6- All of the following are products of the removal of huge quantities of plants except …**

**(Erosion of river banks - arrival of floods - distribution of ecosystem - stability of ecosystem)**

**7- From the following food web, the amount of squirrels decreases at ……………**

**(Decreasing the number of chickens - increasing the number of rabbits - increasing the number of foxes -increase the amount of grass)**

hyaen
rabbit
foxes
Chicke
Grass
Squirre

**8 - During the food chain, …………………transfer between living organisms.**

**(blood - matter - energy - heat)**

**9- ……………… food chain begins with a producer organism.**

**(On land - in the desert environment - in the aquatic environment - all of the above)**

**10 - The arrows in the food chain indicate ……………………………**

**(matter transfer direction - Recycling direction - Energy transfer direction - Increasing the amount of energy)**

**11- Sea turtles are considered to be …(Producing - consuming - decomposing - extinct) organism.**

**12- Coral bleaching occurs at …………………………….**

**(high temperature - low temperature - constant temperature - freezing)**

**13- All of the following are solid except:**

**A) Salt B) Wood C) Iron D) Benzene**

**14- …………………. is a liquid substance.**

**A) Salt B) Wood C) Iron D) Benzene**

**15-- ……………….. is the state of water when it freezes.**

**A) Solid B) Liquid C) Gas D)Vapor**

**16 - ……………….is/are an example of solid matter.**

**A) Clouds B) Books C) Small ponds D) Mineral water**

**17- ………………………….is an example of liquid matter.**

**A) Ice cream B) Orange juice**

**C) Carbonated water D) Molten ice**

**18- The energy of solid particles is……....... the energy of liquid particles.**

**A) greater than B) less than C) equal to**

**19 - …………………. particles move freely**

**A) Solid B) Liquid C) Gaseous D) Frozen**

**20 - ………matter has particles with large spaces and high kinetic energy**

**A) Solid B) Liquid C) Gaseous D) Frozen**

**21 – Solid particles......**

**A)are coherent B) are free to move c) are incoherent d) take the shape of their container**

**22 - Particles in the liquid state ……………….**

**A)are coherent B) are free C) are very close to each other D) take the shape of container**

**23 - Particles in the gaseous state ............**

**A) are coherent B) are free C) are incoherent D) keep their shape from changing**

**24 - …… particles are in an order and pattern that keeps their shape from changing**

**A) Gaseous B) Liquid C) Solid D) Vapour**

**25 - ……………….. has particles that are interconnected and close to each other**

**A- Water B- Milk c) Water vapour D) Wood**

## Q6: Write the scientific term :

**1 - The main food source for many seabirds. ( )**

**2- Decrease or increase the number of a species of living organism in environment. ( )**

**3- A phenomenon that occurs to coral reefs when the water temperature rises. ( )**

**4 - An area in the ocean where small of coral reefs are cared for. ( )**

**5- Pollution occurs due to the throwing of plastic waste in sea water. ( )**

**6 - Anything that has mass and occupies space. ( )**

**7- A substance with particles that are interconnected and close to each other. ( )**

**8- A substance with particles that maintain their cohesion. ( )**

**9 - A substance with particles that move at very high speeds. ( )**

## Q7: Give reasons for each of the following:

**1 - The importance of natural habitats for living organisms.**

**………………………………………………………………………………………….**

**2 - Human interference in the environment is one of the reasons for changing the natural habitat.**

**………………………………………………………………………………………….**

**3- Ice is a solid state**

**………………………………………………………………………………………….**

**4- Perfume is a gaseous state**

**………………………………………………………………………………………….**

**5- you cant break a piece of iron with your hand**

**………………………………………………………………………………………….**

## Q8: What happens when:

**1 - High amounts of plastic materials in the marine environment.**

**………………………………………………………………………………………….**

**2 - The disappearance of coral reefs.**

**………………………………………………………………………………………….**

**3- Removing huge amounts of plants.**

**………………………………………………………………………………………….**

**4- you open a bottle of perfume**

**………………………………………………………………………………………….**

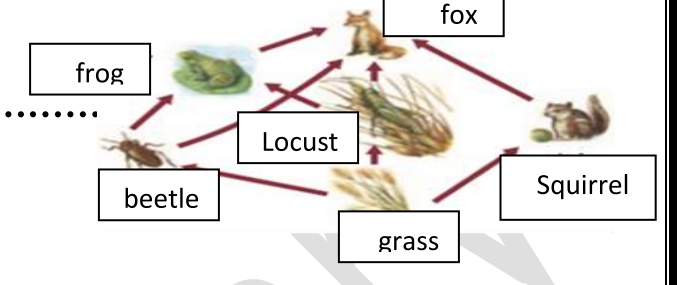
**5-you put amount of water in a new container differ in shape than the first one**

**………………………………………………………………………………………….**

**6-you put a cube of wood in a new container differ in shape than the first one**

**………………………………………………………………………………………….**

## Q9: From the opposite food web, complete:



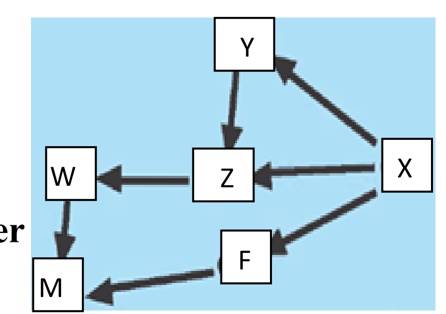

1- The number of locusts decreases when ………………

2- When a squirrel dies, a……… is looking for an alternative source of food

3- the death of …………… causes the death of rest of the organisms in the food chain

4- ……………………… is considered a producer

## Q10: From the following food web, complete:

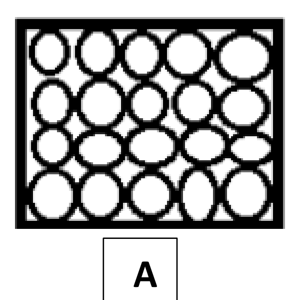



1- The only producer organism is ………………………

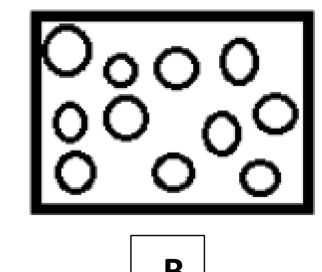
2 - The object (Z) related to the object (X) is considered a……….. consumer ,

and related to the object (Y) is considered a…………. consumer

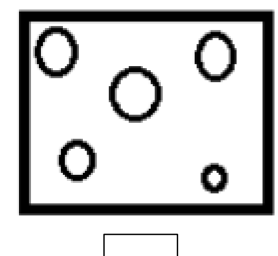
## Q11: Which of the following pictures show the shape of particles in a gaseous substance?



A



B



C

## Q 12: Look at the rising water vapor in the opposite figure, then complete:

**1 – State:………**

**3 – shape :………………..**

**4 – volume:......................**

**6 - The distance between the particles:……………**

**7 - Particle cohesion:………**

**8 - Particle movement:…………**

**9- Mention the state of container?**



# Answers

## Q.1

| 1- End | 8-Eagles | 15-Improve | 22-zero (non) | 29-large | 36-keep its shape |
|---|---|---|---|---|---|
| 2- Fungi | 9-Scavengers | 16-The occurrence of drought | 23-Solid | 30 Ice | 37-take the shape of its container |
| 3- Nutrients | 10-Disturbed | 17-Search for small fish | 24-difinite volume | 31-Particles | 38-move very fast |
| 4- Sun | 11-Light | 18-Beginning | 25-Gaseous | 32-Solid | 39-moving very fast |
| 5- Producer | 12-migrate to other places | 19-warm | 26-motion | 33-Oxygen | 40-Space satellite |
| 6-food and Energy | 13- disappear | 20- Microorganisms | 27- movement of Particle | 34-Solid | 41-Freezing |
| 7- hawks | 14- may die of hunger | 21-Sun | 28-more | 35-close to | |

## Q.2Complete

1. Plants
2. decomposers
3. Remains of dead plants
4. scavengers - decomposers
5. Light
6. Producers
7. destroyed
8. destroyed
9. Producers , decomposition
10. restoration
11. Natural habitats
12. Coral reef bleaching
13. Stone, feathers

**14. Occupies space - has mass**
**15. Solid**
**16.Gaseous**
**17. gaseous, solid**
**18. attraction**
**19. indefinite**

## Q.3 Correct :

1. **End**
2. **decomposers**
3. **Predator**
4. **decomposer**
5. **Consumer**
6. **Primary consumers**
7. **Fungi**
8. **Sticky**
9. **decrease**
10. **Marine reserves**
11. **Increase**
12. **decomposer**
13. **The top of the mountain cliffs**
14. **Producers**
15. **Small fish**
16. **increase**
17. **Sunrays**
18. **clear**
19. **Solid**
20. **Slowly**
21. **gas**
22. **Interconnected**
23. **Very close to each other**
24. **Solid**
25. **Solid**
26. **Completely freely (very quickly)**
27. **gas**
28. **gas**

## Q4

| | |
|---|---|
| 1-× | 17-√ |
| 2-√ | 18-√ |
| 3-√ | 19-√ |
| 4-× | 20-√ |
| 5-√ | 21-√ |
| -6 × | 22-× |
| 7-√ | 23-× |
| 8-√ | 24-√ |
| 9-√ | 25-√ |
| 10-√ | 26-√ |
| 11-√ | 27-× |
| 12-√ | 28-× |
| 13-√ | 29-√ |
| 14-√ | 30-√ |
| 15-√ | 31-× |
| 16-√ | 32–√ |

## Q.5 Choose :

**1 – Adaptation of objects to the environment**

**2 – Light rain**

**3 – Diving in the depth of sea**

**4 – the coral turns completely white**

**5 – All of the above**

**6 – Stability of the ecosystem**

**7 – Increasing the number of foxes**

**8 – Energy**

**9 – All of the above**

**10 – Energy Transfer Direction**

**11 . Consuming**

**12 – High temperature**

**13 – Benzene**

**14 – Gasoline**

**15 –Solid**

**16 – Books**

**17 – Ice cream**

**18 – Less than**

**19 – Gaseous**

**20 – Gaseous**

**21 – are coherent**

**22 – take the shape of their container**

**23 – are incoherent**

**24 – Solid**

**25 – Wood**

**Q6:**

**1 – Small fish**

**2 . population**

**3 –** bleaching coral reefs

**4 – nursery**

**5 – Plastic pollution**

**6 – Matter**

**7 – Solid**

**8 – Solid**

**9 – Gaseous substance**

**Q7 :**

**1 – Because** they **provide living organisms with everything they need, to survive.**

**2 – Because he built roads** and **buildings**, **threw wastes into water, and overfished** fish**.**

**3- because the particles of ice are very close to each other and has a strong attraction force**

**4- because the particles of perfume are very far from each other and has a very weak attraction force**

**5- because it has a strong attraction force between its particles**

**Q8:**

**1 – Damage to the marine environment and all living organisms living in it and cuases destruction of marine food web**

**2 – Negatively affect coral** population **, fish population and human population communities that depend on them for food.**

**3 – the ecosystem will destroy**

**4- the smell of perfume will spread all over the room as it is a gaseous state**

**5- the water take the shape of new container**

**6-the shape and volume of the cube still constant**

**Q9:**

**1 – frogs increase**

**2 – Fox**

**3 – Herbs**

**4 – Herbs**

**(10)**

**1 – X**

**2 – primary consumer - secondary consumer**

**(11) Fig. C**

**(12)**

**1 – Gaseous**

**3 – indefinite (variable )**

**4 - indefinite (variable )**

**6 – Very large 7 – Very weak 8 – Random very fast 9- Solid**